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## ABSTRACT

A major problem in assessing off-campus experiential learning is the need to structure the learning process and document the learning outcomes. This report describes the procedure developed by the University of California at Los Angeles, that logically analyzes the learning that is taking place and therefore helps to shape and improve subsequent learning experiences of the student. The method focuses upon a record-reflection log and an assessment matrix as tools for assessing sponsored learning. These devices emphasize the role of the student and local supervisors in evaluating and molding learning outcomes. Sample Record-Reflection Log and Assessment Matrix forms are included. Brief descriptions of other programs that provide college students with practical work experience are appended. (Author/MV)

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Institutional Report No. 3  
University of California at Los Angeles  
Revised Edition

DOCUMENTATION AND EVALUATION OF  
SPONSORED EXPERIENTIAL LEARNING

COOPERATIVE ASSESSMENT  
OF EXPERIENTIAL LEARNING

TM006 743

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CAEL (Cooperative Assessment of Experiential Learning) started in March, 1974 as a research and development project involving Educational Testing Service and a group of colleges and universities. Funding was provided initially by the Carnegie Corporation of New York and subsequently by the Ford Foundation, the Lilly Endowment, and the Fund for the Improvement of Postsecondary Education.

Through June 30, 1977 inquiries concerning activities, publications, or membership should be addressed to CAEL, Educational Testing Service, Princeton, NJ 08540.

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This Institutional Report is one of a series (No. 1 through No. 5) reporting selected special project work carried out during 1974-75. This edition was substantially revised during 1975-76 and replaces an earlier version that bore the same report number.

Cooperative Assessment of Experiential Learning

January 1977

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This revised Institutional Report was prepared at the Office of Experimental Educational Programs, University of California, Los Angeles by:

Jane Szutu Permaul and Marina Buhler Miko

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Jane S. Permaul  
Project Director

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## PREFACE

For the past two years the UCLA Office of Experimental Educational Programs (OEEP) has been involved in the development of techniques for documentation and assessment of sponsored experiential learning at the postsecondary education level, through a grant from the Cooperative Assessment of Experiential Learning (CAEL). For the purposes of this report, we include internships, field work, volunteer activities, field research (not directly supervised by instructors), and student-designed independent experiences taking place outside of the classroom and laboratory, as examples of sponsored experiential learning.

In any legitimate learning endeavor, it is necessary to demonstrate and validate learning. We believe that experiential learning, measured properly, has the qualities essential for it to be granted academic credit by American higher educational institutions. In order to do so, it becomes necessary to identify specific learning competences resulting from such experiences, especially those unique to experiential learning. And if there are unique dimensions to experiential learning, techniques must be developed to document and measure them.

The study reported here, divided into three major phases, has focused on the following objectives:

1. Identification of Specific Learning Competences. Through records and interviews with students, faculty, and others involved in the sample experiential courses and programs, specific "learning competences" have been identified. Characteristics of these learning competences and their relationships to each other are being explored. To the extent possible, these "competences" are to be grouped or categorized to allow for comparison between the experience of one student and another, as well as between one

course and another. These competences then can serve as possible criteria for assessing experiential learning, in circumstances where no measurable objectives are available for use as assessment criteria.

2. Identification of Judges, Their Qualifications, and Their Role. We have concentrated on four potential sources as judges: the faculty-instructor, the practitioner-field supervisor, the independent evaluator, and the learner. Two major areas of concern are their respective qualifications as judges and the elements to be judged.
3. Development of Assessment Procedures Using Judges. In addition to identifying criteria and persons qualified to apply such criteria to evaluate experiential learning, a valid and reliable data base needs to be established. Therefore we have been focusing on formats for recording the learning process and activities which capture the actual experiences of participating students. We also have been concerned with finding ways to summarize the information so that the judges might easily interpret and apply the criteria

The first phase of the study (Fall Quarter, 1974) was exploratory in nature. We concentrated on review of literature, collection of free-response material, and conducting open-ended interviews to produce the following:

1. A preliminary set of criteria to aid in exploring the quality and quantity of an experiential learning endeavor, including process and outcomes.
2. A means of recording and documenting learning that occurs during an experiential process.
3. Identification of expert experiential learning judges, their qualifications, and their responsibilities.

A sample group of UCLA students was selected from three very different models of experiential learning. Because of limited time, the size of the sample was kept small. It included:

- Two English Courses in Publishing and Editing, which had 21 students and 17 students enrolled, respectively. The students attended weekly seminars featuring guest lectures by professional editors and UCLA English Department professors. Students also participated in campus workshops as well as supervised field study at a Los Angeles publishing house. The courses were designed to involve students in all aspects of producing a professional journal: format, meeting publication deadlines, proofreading, copy editing, and so on.
- Program GROWTH, which included 22 students at three field sites during Phase I and 28 students at four field sites during Phase II. The students worked in the area of community mental health, with formerly hospitalized mental patients. Under the supervision of professionals, GROWTH student volunteers were involved in various activities aimed at aiding former mental patients residing in board and care homes to re-enter society as valuable contributing citizens. Students were engaged in counseling, recreation, socialization, vocational guidance, education, creative development (art, music, dance), and other activities. Approximately 40 hours per week were spent by students combining learning through service in the field with academically-oriented UCLA courses.
- Introduction to Experiential Education, a course which had 13 students during the Fall Quarter and 5 in the Winter Quarter. The 13 students spent the Fall Quarter writing their learning contracts which, once approved, were implemented during the Winter Quarter by those continuing.

Our effort toward the development of a recording instrument began with the students keeping journals using the Flanagan critical incident technique. The journal concept then evolved into that of a daily log. By the end of the fifth week in Phase I, the Record-Reflection Log emerged. In the Record Section of the Log, the student merely wrote down events of particular interest that day in the experiential learning activity. In the Reflection Section, the student was able to explain specifically those thoughts, ideas, concepts, or questions which had grown out of the activities and experiences recorded. A third and fourth section were added to give both the student and log analyst additional means to convey reactions.

Each log (as well as other free-response materials) was analyzed in order to identify possible learning competences applicable to a wide range of experiential learning programs. We desired to use these learning competences for judging the quality and quantity of a student's experience and for comparing one experience with another. Five learning categories were incorporated onto the Assessment Matrix and five levels of competences were identified; these were used as general judgment criteria.

From our review of the literature, and our own interviews and experiences, we discovered that besides more obvious persons such as instructors and field mentors who normally are the sole judges of a learning experience, student participants in a learning experience "in the field" and the independent evaluator of the log, emerged as having critical roles as expert judges.

At the end of Phase I, we tentatively agreed on an experiential learning evaluation model using a team of judges for each student which included the student, a log analyst (i.e., independent evaluator), an instructor, and a field mentor, with the Record-Reflection Log as the recording instrument of experiential activities and students' related thoughts, and the Assessment Matrix as the summarizing document of learning.

Chapters I and II of this report elaborate respectively on the nature of the project problem and the theoretical, conceptual, and philosophical bases from which the assessment model evolved.

The second phase (Winter Quarter, 1975) was devoted to testing and refining the evaluation model as well as obtaining a rough measure of its validity and reliability. A complete log packet was provided to the students each week throughout the Winter Quarter. An expectation form and a demographic

questionnaire accompanied the first week's packet to give us a profile of our student sample. Students completed mid-term and final expectation sheets as well. The information proved to be helpful not only as validating data for the log but also as formative evaluation data for the program and student learning.

Log recordings were summarized by the log analyst weekly utilizing the learning categories and competence levels on an Assessment Matrix. The conclusions drawn independently from the logs by the log analyst were compared with the instructor's assessments of the student's learning. Despite the need for minor modifications, the findings were most encouraging.

Thus, at the end of Phase II, we had refined the original model, including a set of guidelines, a Record-Reflection Log, and an Assessment Matrix to be used in assessing experiential learning. We have involved students, log analysts, faculty, and field mentors as judging teams, with each person's contribution based on his or her own impression of the experiential learning endeavor.

The refined model along with a set of written guidelines were presented to member institutions of CAEL for review, tryout, and feedback. The model was also field-tested in Phase III (Academic Year 1975-76) by five institutions, each adapting the model to meet its own institutional and programmatic needs. These institutions and programs included:

Bethany College, Practicum Program

Brevard Community College, Cooperative Education Program

California State College, Bakersfield, Student Intern and  
Experiential Learning Programs of the School of Natural Science  
and Mathematics

King's College, Pre-Law Internship, Resident Assistant Internship,  
and Wilkes-Barre Police Department Internship

University of Minnesota, University College, Management Internship  
and Clinical Instrumentation Systems Program

The field data from Phase III supplemented by feedback from informed CAEL members further refined the model. Additional utilization of the instruments and concepts with minimal modifications have also been identified. Chapter III presents the refined assessment model using the Record-Reflection Log and the Assessment Matrix. It provides specific instructions and illustrations on its use and its values. Chapter IV summarizes possible local adaptations of the Log and Matrix and deals with some of the critical issues which need to be considered in adapting the model for local use. Finally, Chapter V considers the possible use of the "Record-Reflection" concept in documenting previous experiences for credit assessment. It also entertains the use of a matrix to summarize the voluminous portfolio materials supporting the quantity and quality of previous experiential learning.

This entire project has been motivated by our concern to know more about the process and values of experiential learning. Also, we have been moved by our needs to accurately document experiential learning for the purposes of formative and summative program evaluation as well as for student achievement. Finally, and of greatest importance, we are concerned with the quality of experiential education, especially for the learner. It is hoped that readers of this report find the material useful and stimulating along the lines of these concerns and needs.

## 1. PROBLEM STATEMENT

It is a well-established and accepted practice in American higher education for expert judges to assess the learning outcomes of traditional academic courses. Such judgment is consistently employed whenever an instructor grades a paper or evaluates any aspect of a student's work. The standards used in judging such traditional academic products generally are the result of a faculty mentor's academic background, and may include comparison between students as well as both formal and informal discussions by instructors within the same discipline involved in teaching similar courses. The desirable learning outcomes usually involve the quantity and quality of knowledge gained in a particular subject (frequently measured through tests and reports) and, to some extent, depend on an estimate of the cognitive growth attained by the student in dealing with the subject. Within the framework of any single traditional course, the evaluation is quite standardized. It usually depends on the judgment of a single person who consistently applies whatever criteria he or she has deemed appropriate to evaluate a given student's achievement at one or more points in time during an academic term.

To use such expert judgment in the evaluation of experiential courses is more variable and complex. The setting where experiential learning takes place is not as controlled and regularly observable by the instructor involved as is the case with traditional classroom or laboratory learning. In addition, more people (i.e., field mentors, clients, organizational staff, and so on) contribute significantly to the learning process as compared to traditional courses. The outcomes of experiential learning include, in addition to specific knowledge and

cognitive growth, such learning areas as interrelationships among people, the effect of the environment, the heuristic skills involved in independent and field learning, application and implementation of perceived and theoretical concepts, and the development of special skills and abilities. These added learning dimensions are not always measurable in the same manner as those of more traditional academic courses. Furthermore, traditional expert evaluation generally slights the function most essential to experiential education. Proof is found in educational products such as examinations and assigned papers, rather than through the process of learning as it evolves. Experiential learning is process-learning; it involves a series of continuous developmental stages.

Aside from documenting and assessing student learning, there is a concern to monitor the field experience as the vehicle for students to achieve their established learning objectives. Is the field-experience a realistic way to achieve the established learning objectives? Is the field-experience environment appropriate for the student and what he or she has proposed to learn? If not, what could be done to alter the conditions? Are there other learning experiences that might occur of which the student is unaware? How can such opportunities be identified and used? In terms familiar to the evaluator, there is a need for data to conduct formative evaluation.

Until recently, we have relied on limited sources for information. They include:

- Occasional faculty-student meetings on both an individual and group basis, at which time students report on their respective experiences.

- Visits by faculty to sites of student involvement (usually not more than once during a course period; at times, such visits are impossible because of geographical locations of field projects, time constraints, etc.).
- Final papers and reports a student produces at the end of the course.
- Reports from field supervisors (the value of such reports varies significantly, depending on the qualifications, nature, and involvement of the supervisors).

These sources of experiential learning assessment, though invaluable in the overall evaluation of a student's achievement, have certain limitations. They do not begin to provide all of the information needed to answer such questions as were posed in the preceding paragraph.

Of the multiplicity of factors which complicate the evaluation of both experiential learning products and processes, the following are most germane to this particular research project:

- Lack of knowledge and consensus on the elements (criteria) which constitute "a desirable learning experience" for experiential courses.
- Specific evidence required to validate the actual occurrences of the experience.
- Existence of more than one expert: the academician, the practitioner, and the student.
- Process emphasis in evaluating experiential education (as opposed to the product orientation of traditional-study assessment).

In view of the aforementioned, this project concentrates on three major problems. The first is concerned with gaining more precise and complete knowledge of the nature of learning (e.g., assimilation of knowledge, application

of theory to practice, testing of values) acquired through experiential courses. Such information is essential to reach a consensus on what elements (i.e., criteria) constitute "desirable experiential learning" or "creditable experiential learning." A necessary supplement to such knowledge is a means for documenting and demonstrating those elements which constitute the learning experience.

The second problem deals with the question of who should be the evaluators; they must deal with several essential areas:

- Judgment (record and reflection) on how and what the student has learned through his or her experience.
- Judgment (interpretation) of how the actual learning relates to pre-established learning areas and skills which constitute desirable and creditable learning activities as well as to the course objectives.
- Judgment (evaluation) on how well and how much the student has learned based on the parameters of the experiential course.

Finally, but of equal importance to the other two, is the problem of developing a systematic way of documenting the learning process and activities which assures a high degree of reliability and validity in the evaluation of student performance by several judges. Ideally, such standardization also should allow for evaluative performance comparison of students engaged in dissimilar experiential projects. Additionally, there is a need to use such systematic documentation as a monitoring and formative evaluation device both for the course and for each individual student.

## II. CONCEPTUAL AND THEORETICAL FRAMEWORK

In establishing a framework for documenting and assessing experiential learning, we approached the challenge from a philosophical perspective, taking into account both technical and scientific factors as well as the programmatic concern of the acceptability of our results to the users of the instruments.

Four hypothetical issues, based on review of existing knowledge, served as the initial framework of the study. These issues were tested and subsequently refined:

1. Assessing the state of experiential learning theory clarified the importance of process evaluation.
2. Weighing the roles of expert judges indicated a shift away from the traditional instructor as sole judge.
3. Identifying free responses to document the learning process led to the development of a unique log format.
4. Determining methods of analyzing log data brought about our discovery of the value of utilizing both literature and content analysis.

This chapter is an account of the conceptual thinking which helped shape the ultimate design of the evaluation model.

In "Differences Between Experiential and Classroom Learning," James Coleman (1976) makes a point of distinguishing between learning theory and instructional theory.

While learning theory attempts to explain the psychological and physiological processes that take place when learning takes place, theories of instruction attempt to specify the optimal set of activities on the part of an outside agent (an instructor) for bringing about learning. (p. 49)

Joseph Katz (1972), in what he has called the developmental theory of student learning, has provided a good statement of the psychological processes necessary for learning to take place:

1. Students learn if their studies connect both with motivation and with aspirations, among them achievement of personal identity, occupational identity, a satisfactory life style, a sense of competence.
2. There must be self-direction in the student's process of learning, and he must have autonomous participation in the planning and execution of what he learns.
3. The student's learning must issue in a product that has its own self-contained integrity and must be more than make-believe or a testing hurdle.
4. The student's work must be useful to himself and, wherever possible, useful to others. This contrasts with situations in which the primary product for the student is a grade which may or may not be an ornament on his record and a career token but which has few other consequences.
5. Learning is facilitated when students learn in groups which are oriented to a common task and in which what is found out is mutually complementary.
6. The professor or other adults must be interested in the student's work and convey this through task-minded encouragement and evaluation.
7. The professor himself must treat the subject matter in an inquiring mood, and he must be interested in the subject matter he is teaching. (Hence students will always rate the "enthusiasm" of the teacher as an important incentive to their own learning.)
8. There must be no neglect of other developmental tasks that students face during their passage through college--such tasks as the achievement of self-esteem, of competence, of acceptance by and integration with others, and many more. If obstacles are put in the way of the achievements of these tasks, the effect is one of depressing the students' willingness to learn. Hence often not much more than examination complicity, that is, temporary memorizing and forgetting, can be expected. But if cognitive learning is tied to the achievements of other developmental tasks, gains can be achieved for both. (pp. 142-143)

Katz supports these principles which students have been pointing out to us for years; the motivation to learn must be tied to personal and occupational identity, life-style, a sense of competence. Katz also indicates the need for programs to offer the learner a sense of autonomy and to provide experiences with inherent integrity, usefulness, and group interaction (as well as teachers who want to learn themselves).

Often an experiential course is charged with a great deal of meaning for students because it allows them the chances to be involved in courses which stress developmental growth--opportunities not always available in the instructional environment. In their article on cross-cultural learning, Harrison and Hopkins (1967) criticize the traditional university model of education because it does not teach young people what they need to know to operate effectively in the world.

With few exceptions, formal systems of higher education in the United States provide training with manipulation of symbols rather than of things; reliance on thinking rather than on feeling and intuition; and commitment to understanding rather than to action. These systems were designed originally for the training of scholars, researchers and professionals. (p. 432)

While such remarks may be overstated, still most students' basic need to be involved in an action-oriented situation is very evident. Certainly there is a difference in dimension and desire to learn between those students who have successfully implemented assertion-training seminars or organized a monetary system for city hall and those who have sat in lecture courses five days a week. Such a difference emphasizes the importance of action in the learning process.

Somewhere in the college curriculum students should be given the chance to "try a hand" at what they are studying. Unless we provide students with some chance to engage both practically and theoretically in a learning situation, we produce students who are unable to operate without authority figures and expertise behind them, who do not and cannot take risks and thereby are not able to function independently. Harrison and Hopkins' observations, based on Peace Corps trainees, may not be applicable to graduates of the traditional university. But many of the students in our sample experiential courses identify just such feelings of inability and lack of trust in themselves. This suggests the importance of courses which emphasize and try to foster Katz's idea that learning should put a premium on meaningful involvement and the opportunity for action.

James Coleman (1976) explains the learning process by setting out a series of steps--those which are applicable to the traditional learning situation and those which apply to experiential learning. In doing so he particularly points up the different action opportunities for students. In the traditional instructional setting the student (1) receives information, (2) understands the general principle behind the information, (3) particularizes or applies the general principle to the particular situation, and (4) acts--thus moving from the cognitive and symbolic processing sphere to the sphere of action. The experiential learning sequence is from (1) acting in the particular instance to (2) understanding the particular case, (3) generalizing from the particular, (4) acting in a new circumstance based on what has been learned from the particular-to-general understanding process.

These complex theories underlie both present and future assessment processes.

#### Experiential Learning Theory Assessment

Many well-known colleges in the United States have had extensive involvement with experiential learning. For a number of years these programs have been sending students off campus for credited learning experiences. The assumption behind the acceptance of such experiences has been that students can and do learn "out there" and that "the interweaving of the theoretical and practical should accelerate learning and make it more lasting." (Henderson and Henderson, 1974, p. 93) Monitoring of such programs has varied from providing students with resident faculty mentors to offering no supervision. Assessment was deferred to the end of the experience--the idea being that students should undertake the experience freely; reports or essays were done subsequently to explain the significant learning that had taken place.

Run largely by faculty, these programs thus employ product assessment of two different kinds. Some programs put all their efforts into articulating the learning experiences in the field with the theories and methodology of a particular discipline. Others attempt to register, at least, the student's affective or attitudinal growth--their attempt to clarify their own values, their increased motivation to learn, and so forth. In such instances, students are asked to sum up their experiences in terms of the benefits they received--usually in the form of a written report. In other words, thus far assessment

of experiential learning has not concentrated on formative evaluation.

Recently concern has been expressed to develop assessment procedures that would look at the programs and the students in these programs while they are in progress. Both the use of outside observers and the use of performance testing are results of this effort to assess the learning experience while it is taking place in the field. However, observational measures and performance testing, unless done throughout the course of the program, do not distinguish between the actual learning activities in which the students are involved, nor do they provide information about the learning effectiveness of these activities as seen by the students.

Students have always been concerned that assessment procedures take into account what they really learned in an experiential course. Especially regarding experiential courses, they claim that no amount of papers or sporadic site visits can begin to assess what they really got out of the experience. One hears over and over again such comments as, "I got more out of one week in that place than all the three years I spent in a classroom," or "That paper I handed in does not come close to explaining what I learned." Whether or not one agrees with such student self-assessment, those important experiences should be a part of how we assess the students' experiences.

Clearly a need exists to create complete evaluation designs for experiential courses. Such designs would look for the same kind of information one looks for in other courses--evidence of effective course design (objectives, guidelines,

realistic goals),<sup>1</sup> effective supervision, and student progress.<sup>2</sup> But these designs also would concentrate on evaluating the effectiveness of the particular environment to ensure that it has the capability of providing the instructional objectives of the program.<sup>3</sup>

#### The Question of Expert Judgment

Expert judgment in institutions of higher education has always been the prerogative of the instructor, who designs the course, knows the subject matter and skills taught in the class, and has been the one to say to what degree a student has mastered them. This prerogative may be questioned from time to time; it has been questioned for years by the students, to whom the whole process is "meant to happen." But generally the instructor's judgment has not been seriously challenged by anyone in a position to change it.

Recently a whole new set of "expert judges" has come on the scene.<sup>4</sup>

The question which comes to mind (whether one is dealing with the assessment of a student's performance by the teacher or by an outsider trying to assess the

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<sup>1</sup> Learning contracts designed by the student with clear objectives and plans for implementation and evaluation have proven invaluable guides in experiential courses.

<sup>2</sup> Care should be taken that the documentation instrument shows that a student was thinking about what he or she had learned and that such thinking indicated a certain level of intellectual ability. Such evidence would permit credit to be granted for the course.

<sup>3</sup> Mehrabian and Moos (1974) and others in the field of social ecology have been experimenting with ways to measure particular environments.

<sup>4</sup> In a paper presented before the California Association on Institutional Research, Jonathan Warren (1975) of Educational Testing Service makes a case for the outside experts' ability to assess the quality of teaching. He discusses the accreditation teams' sending a group of expert judges to interview the students

quality of teaching) is how to establish a set of mutually acceptable criteria. The comparison of learning performance assessment with artistic performance assessment is provocative because it brings up a common issue: who is better able to judge the performance--the artist who performs it or the critics who observe it? Similarly, students think they have a right to say what they have learned, while professors think they are the better judges. In the artistic world we listen to both. In university experiential programs we also are beginning to realize we should listen to the students, who know the learning experiences the field site provided and thus may be considered expert judges of their own performance.

Given the possibility of using other expert judges, we interviewed several college and university faculty members who had an extensive involvement with off-campus learning. The purpose of these interviews was to explore the issue of what other expert judgment was needed in experiential learning. Those interviewed believed that experiential learning presented the faculty expert judge--and hence the student recipient of that judgment--with a very difficult situation; the faculty member does not always know what the off-campus learning is for the student, as the faculty member has no real control over what the student encounters in the field. One faculty member, experienced in graduate school off-campus placements,

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and "judge the effectiveness with which the students dealt with or were aware of the issues with which the course was concerned." These experts then are to use the students as the product on which to base their assessment of the program. Dr. Warren argues that such an assessment is not that difficult to do and that like critics of any specialized activity (the judges of an athletic performance, the critics of a musical performance) these "outside" experts have to know the activity they are examining.

was convinced students were caught between the expectations of the faculty member and acceptable field-site performance standards. For example, a report written for a firm might be acceptable to the firm but unacceptable to the faculty member. Another faculty member who had designed off-campus secondary education career training courses stated that the faculty members were often unable (through lack of experience) to understand the dynamics of the work situation.

The central issue raised is whether a faculty member can be the sole judge of a student's learning in an experiential course if the faculty member is not directly involved at the particular field site. In such cases a third kind of expert judge is needed. This person would have to be one who understands the dynamics of the particular work site and the learning potential actually offered the student.

Thus experiential learning courses require at least three expert judges: the student, the faculty member, and the field supervisor.

#### Documentation of Process Learning

Based on our review of learning theories and on feedback from students involved in experiential learning as reported in the last two sections, it became evident that an instrument was needed for experiential learning process assessment. The learning contract helps students direct their field study. Final projects partially reveal a student's achievement at the end of a given period of time. But at present there is no available means to tell us exactly how a student got from the proposed field study to the final project he or she produced. Thus, an instrument was needed not only to record activities

engaged in by the student but more importantly to document the developmental learning that was taking place.

To develop such an instrument, we first asked the question: how do students learn? Do people learn through critical incidents, or is learning a more gradual process which occurs over a period of time and includes (but is not always directly an outgrowth of) critical incidents? If we used logs to assess a student's learning process (and indeed the collective process of learning in a particular course), would we be assessing critical incidents?

John C. Flanagan's work on the critical incident technique provides a definition and a rationale for using critical incidents to assess the learning which has taken place. He defines the critical incident as one which makes a "significant contribution, either positively or negatively, to the general aim of the activity. The definition of 'significant' will depend on the nature of the activity." (Flanagan, 1954, p. 338) In the case of most of the activities he studied--testing the performance of aviation pilots--the significant incidents involved in the activity of learning to fly were readily accessible to the observer and the assessable behavior was fairly easy to identify and evaluate. Students' reporting of significant field-experience learning is more general; it is a more difficult "activity" with which to deal.

However, the rationale for using critical incidents to collect evidence of learning is basically sound for our assessment needs also. Students in the sample do talk about the significant experiences--incidents--they have had out in the field and they tend to remember them. Thus, as Flanagan explains,

The critical incident technique, rather than collecting opinions, hunches, and estimates, obtains a record of specific behaviors from those in the best position to make the necessary observations and evaluations. The collection and tabulation of these observations make it possible to formulate the critical requirements of an activity. (p. 355)

Hence, if one wants to find out what was important about what a student learned in a course, one can collect the critical incidents reported by the student. A record of these behaviors can provide information on the critical requirements of learning.

Flanagan's work deals primarily with critical incidents performed by the person but assessed by outside observers or teams of observers. Thus when he talks about those in "the best position to make the necessary observations and evaluations," he does not mean the person who is doing the performing, but an observer of that performance.

Flanagan's analysis of critical incident behaviors is based on a classification system. He examines the incidents, groups them into categories, and uses these categories for later incident classification. John Duley (1974) adopted Flanagan's analysis of critical incidents to assess student learning in cross-cultural, career-exploration, and service-experiential learning settings, asking specifically that students write about critical incidents and that they explain how they attempt to use certain specified skills in these incidents. These skills are categorized and derived from the general aim and objectives of the course rather than from an empirical study of the critical incidents which have occurred in the program. Students in the field write down the critical incidents in which they apply skills in such categories as information-source

development, cultural understanding, interpersonal communication, commitment to persons and relationships, decision making, self-understanding, and self-reliance.

In Duley's use of critical incident reporting, the student becomes not only the one who experiences "the behavior" but also the one who reports how the behavior relates to the skill categories of analysis provided by the program or course. In addition to Flanagan's concern with immediate transcription of the behavior, Duley finds the student's "reflections" on what he or she has learned in a critical incident equally important. Duley's data, therefore, provide not only descriptions of "critical incidents" but also students' thoughts on those incidents.

These two distinct types of information--the direct observation or recollection of critical incident behavior, and the reflection on critical incidents--offer quite different learning evidence. The collecting and tabulating of critical incidents, as advanced by Flanagan, "represent a pattern of behavior or a series of similar behaviors." (Flanagan, p. 333) The reflection, as called for by Duley, sheds light on a student's analysis of the incident, his or her understanding of the incident, and possible values that influenced the student's behavior in the given incident.

In using the critical incident technique, Duley defines critical incident as a brief description of an event in which the student tried to use or apply one of the cross-cultural skills in an incident or situation that involved the student directly. He further states that "critical incident" does not necessarily infer "earthshaking or traumatic" events, but rather something "significant in some way" to the student and "related to one of the [cross-cultural] skills." In writing

up a critical incident, Duley's students are instructed to show how an incident allowed them the chance to practice one of the established cross-cultural skills. Specific instructions are given on what should be included in the "critical incident writing." There should be a total of nine such recordings, three narrative-type and six shorter newspaper-type, according to Duley. These then become the basis for an interview, the purpose of which is "to help identify and clarify the values influencing the student's behavior in the incident and to facilitate the discussion of the significance of the field experience for the student." (Duley, 1974, p. 19)

The critical incidents thus become one of the number of ways to assess the final product--what a student has learned about a designated area or course object. It is also a means of gaining some evidence of the progressive development of the student's understanding.

This procedure, however, is limited in its capacity to assess the student's own ability to build his or her categories, since the categories and means of analysis are prescribed for the students. The authors believe that students show their understanding by making what they can indeed make out of what has happened to them. Duley's procedure reflects more of the approach of the instructor who says, "I'll give him the categories and then I can see how his critical incident writings measure up to course objectives."

To return to the problem of what information is needed from student logs (critical incidents or a description of the overall learning process), we found in our study that students record both. But because they record everyday thoughts, questions, and even their confusion, the critical incidents make more

sense. Judged against the lesser incidents and everyday occurrences, such incidents stand out--their "critical" nature becomes apparent.

Early in Phase I, we also found that we had to play down the notion of "the critical incident" in order even to get documentation at all. Some students said quite emphatically that they did not learn dramatically. Others felt that what happened to them every day was not important enough to enter in the log. After discussion with those students, we found that they undervalued the importance of what they engaged in. They were waiting for the "critical incident" or, as one student put it, "I always thought you wanted Divine Revelations when they occur--if ever." This indicated a need for going beyond the recording of just critical incidents for the purpose of assessment. We, therefore, expanded on both techniques developed by Flanagan and Duley.

The instrument that we designed for documentation of experiential learning included:

- From Flanagan--

1. The idea of collecting critical incidents to look at the behavior they show.
2. The assessment of the behavior by abstracting patterns of student behavior from the incidents.
3. The notion that classification and analysis of these incidents should involve an outside observer.

- From Duley--

1. The technique of reflecting on the critical incidents through the medium of language.

2. A consideration of "values" operating in an incident and how these values relate to the student's understanding of the incident and to his or her feelings toward it.

Building on Flanagan's and Duley's work, our findings from log analyses indicated that:

1. We need to look at both the critical incidents as well as the daily happenings.
2. What we were looking for by examining the log data was the process of understanding, whether the data included many critical incidents, a daily confusion about behavior and meaning, growing awareness of something, or any combination of these.
3. The evaluator should be responsible for analyses of both what a student thought an incident meant and the progression of incidents, without steering the student by imposing learning categories on him.
4. Category analysis by the evaluator is useful in consistently summarizing and analyzing free-response data and should not be used by the students to guide their log recording of experiences (as much valuable information could be lost in such structured responses).

#### Self-Assessment and Its Impact on Learning

Other groups of researchers experiment with critical incident recording but belong neither to behavioral-oriented psychology nor to teaching but to psychotherapy. They use past critical incidents for the analysis of a larger developmental process: the growth and character of the person being analyzed. The analysis of this growth is done by the participant with help from the therapist. Dialogue House (under the direction of Ira Progoff) has been working out the technique of journal-keeping as a way of doing self-analysis. (See Progoff, 1975). Through intensive journal-keeping, the client begins to

understand his own hidden agendas--not simply the values and attitudes which led to his behavior in one incident, but the agendas he has for all incidents. The idea behind such activity is to help the person get in touch with himself so that he can realize his own potential. The theory is that those who know what they are about are able to operate effectively in the world. The journal-keeping operation helps establish a pattern of self-discovery.

Journal-keeping by clients at Dialogue House and log-keeping for understanding and assessing student learning have had similar results. Both their clients and our students underwent self-discovery. We were able to read one Dialogue House conducted teaching experiment with journal-keeping. They trained a group of jobless workers to keep journals for the New York State Department of Labor. Their success, in terms of workers who got and retained jobs after this experience, was the best the job-training division had ever had. The following quotation is from a journal kept in that experiment:

I came into classes and it felt good, the education . . . working in the Journal is a big help also. I was in a program before, at a hospital, we were all volunteers. It had a lot to do with psychology, there were therapy sessions every night, like encounter. I had a lot of things going on, but I didn't know then that it was to benefit me. But I did progress from it. The Journal, though, is more for yourself, to help you straighten out yourself. Like right now, I can't do without writing in it. If I go without writing for a week or two, I get everything just jumbled up on top of me . . . The people that used to hang around me can see the difference. They say, "Oh, she's a square now." It was a very bad scene before, and you know, that can get to you. So I have to write now about what's happening to me, the dreams . . . then after I write and read it, then I feel everything has gotten back to its place. (Sealy, p. 2)

Compare the above quotation with the following quotation from a student in our sample:

Although this is no longer a "new revelation" I am constantly surprised how much this program (the board and care home activity and keeping logs on what I have learned) has resulted in the crystallization of my hopes, theories, goals, feelings, etc., etc. Fantastic! I find I have to verbalize many things for the first time in my life--really has helped me define (and sometimes reject) many things I've been carrying around in me for years.

Such a statement reflects the principles of Katz discussed earlier. For this reason we have not tried to influence or prioritize the students' entries. What they give us shows us their own particular emphasis, their identity, concerns, and areas of growth.

The log- and journal-keeping in itself is a critical incident when students suddenly realize they understand something about themselves. The Dialogue House research confirmed a sense we had that journal-keeping would also need to:

1. Show us not simply the progression of learning experiences but the hidden agendas of the individual students.
2. Reveal the collective characteristics of student agendas so that we could understand better what they were experiencing and evaluate their work in light of that understanding.

Drawing from Flanagan, Duley, the Dialogue House experience, and our own findings, we believe that students should be encouraged to write about an incident (or incidents) soon after its occurrence (within a day to a week). Sometimes these incidents are indeed "critical" and the understanding that grows out of them is dramatic, but this depends on the opportunities available to the students and on their personality and learning style. What is important is that they should record enough of what is going on and what they think about what is happening to them so that (1) an evaluator has a body of material with which to compare the critical incidents and (2) the development of the students' ideas

over the period of the course can be seen in light of the learning or course objectives. Based on this belief, we have developed a log instrument (the Record-Reflection Log--see Exhibit A) to document process learning. The log contains a "record" of students' learning activities and their "reflections" (thoughts) about those activities. By giving us this information, the logs can help us understand the best, or at least the best possible learning activities as well as other aspects of the experiential environment (need for more supervision, clarity of job definition and design, and so forth). However, it is not the aim of this project to make any radical changes in the instructional capabilities of a particular experiential course. Rather, we want to find out what these instructional capabilities are.

More important than the instructional possibilities of an environment is the learning process the students go through. Why are students so excited about what they learn in an experiential course? Important changes are obviously happening to them "out there" which did not happen to them in the traditional classroom--changes that have made them feel as though these experiential courses are valuable learning experiences.

A feedback situation should also be provided whereby logs are sampled randomly throughout the time period of the program and discussed with students to discover their insights and problems. If this is done (as it obviously is at Dialogue House), the log instrument can be used for both teaching and evaluation purposes. If the program is large enough, the supervisor or faculty member can do the feedback sessions and thus not contaminate the objectivity of the evaluation.

EXHIBIT A

RECORD AND REFLECTION LOG

Dates \_\_\_\_\_

Course/  
Program \_\_\_\_\_

Name \_\_\_\_\_

This log should be used to record your learning experiences and the ideas you have about them. It should be filled in at the end of each week (or more frequently) in which you are involved in your experiential learning course or program. Please try to be as candid as you can. Use the back of this page and any additional pages for more writing space, if necessary.

- I. Record or list the course/program activities and experiences you have been involved in today.

- II. Reflect upon the above and, using the space below, explain those thoughts, ideas, concepts, or questions which have grown out of the activities and experiences you have recorded.

- III. Rate your course activities during this period as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

- IV. Rate the extent to which this course during this period contributed to your own personal growth and development as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

Critical incidents are what the writer who is trying to understand experiences writes about. One has only to turn to literature to be reminded of how important "felt experience" is--for example, William Wordsworth's reflecting on experiences in tranquility and suddenly "seeing into the light of things," or James Joyce's characters experiencing "epiphanies." Even the heroes of existential literature, who spend a good deal of time having dialogues with themselves about their "being in the world," pull together their understanding in one act or one deeply felt perception. The process of writing about experience contains almost the requirement that one see experience in this way. In practice, the act of writing probably does much to force the student to conceive of experience as worthy of being understood. Hence the incidents become significant or critical because a student sits down to write about them.

The act of writing or holding up the light to illuminate this "thing"<sup>5</sup> which is being understood means that the reader is aware of two things: what is being said about the experience and the author who is writing about the experience; it is almost a given that self-awareness and involvement in the experience are a part of the experience. An incident is critical to someone, and the someone in a log is the author of the log--the student. If the student does write about a critical incident, the reader overwhelmingly feels the effect. The writer has pulled together for the reader the writer's involvement, the reader's involvement, and the nature and meaning of the experience. Given this kind of

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<sup>5</sup>The use of the word, "thing," inspired by William Wordsworth, refers to the entire dynamic field in which the student's experiences or incidents took place and from which the student is groping for, or has gained, a sense of cognitive and/or affective understanding and growth.

medium, it is the critical incident which communicates the "felt experience."

The analogy to Coleman's learning sequence is apparent. Both resemble the sequence we see in the logs. This also explains why we designed an assessment matrix with an analysis of skill areas and levels of competence. Students pleased with what they understand usually decide what they are going to do next. In experiential learning, action starts the learning process. Without action, the move to understand and then generalize would not take place. Coleman explains that the weakest link in experiential learning is between action and understanding. One has to make sure that step takes place. Its absence often results from too great a time lapse between the experience and the effect it causes for the learner to understand the general principle involved. Coleman then points out the need for "post game discussion," or some way to go back over the experience and seek out what can be understood from it. In our experiential learning programs usually it is not possible for the students to have post-discussions. But the logs can serve that function. A requirement like the Record-Reflection Log entry can be a way to get students to think back over an experience and generalize from it. In the academic world, it is important to be able to verbalize one's understanding, but as Coleman points out, someone who has learned something through the experiential learning process may not be able to verbalize it but can do it. The act of writing can be a way of enabling a student to explain what he or she understands--an ability required for earning academic credit. This log information also provides the evaluator a measure of students' understanding and how far they have proceeded in the experiential learning process.

### Analytical Methods: Literature and Content Analysis

Given the hypothetical framework developed thus far, it is clear that the analysis of the log data would need to produce four types of information:

1. The kind of learning activities provided by the program or experienced by the students.
2. The frequency, nature, and degree of student involvement in those activities.
3. A way of registering generally the degree of sophistication of a student's thinking and understanding about the incidents and activities.
4. A student's particular approach to those activities and incidents--i.e., the expectations and motivation particular to that student--and his or her resulting growth and development.

We used Flanagan's approach to critical incident analysis to construct the categories for classifying the incidents and activities reported:

The first of those two other steps consists of the classification of the critical incidents. In the absence of an adequate theory of human behavior, this step is usually an inductive one and is relatively subjective. Once a classification system has been developed for any given type of critical incident, a fairly satisfactory degree of objectivity can be achieved in placing the incidents in the defined categories. (p. 335)

The objectives of content analysis, however, are not completely congruent with the objectives of evaluation analysis. As Bernard Berelson (1971) states, "The fundamental objective of all content analysis is to convey phenomena (i.e., symbolic behavior of people) into scientific data." (p. 12) The need, however, was not to turn qualitative data into quantifiable data but to develop a systematic approach to the log material which would not obscure the symbolic

meaning the students saw in their own behavior. Those who have worked with content analysis suggest that data be scanned for certain key words and that the frequency with which they occur be tabulated. However, because we are after meaning, we need more than word-frequency analysis.

#### Analysis of the Log Data

Earlier we presented our goal: a method of analysis which would give us a "student's particular approach to activities and incidents, i.e., the expectations and motivation particular to that student--and his or her resulting growth and development." In other words, we needed a method that would pick up a "student's meaning" derived from the words he or she was using. We also needed a sense of how such meanings expanded and changed over the course of the quarter.

To get at this kind of meaning, the method of analysis must approach language differently than do empiricists and those who work in traditional content analysis. In his introduction to European Literary Theory and Practice, Vernon Gras (1973) explains the structural phenomenologists' approach to meaning:

Empiricism and naive realism believe that language derives its meaning by referring to an "object" in the world. The structuralists (following Saussure) affirm that meaning is diacritical, emanating from terms relating to each other within a system; in themselves, the terms carry no meaning. Fundamentally, it is through combination and selection that terms interrelate and establish meaning. (p. 17)

Students' written log data, while perhaps not as sophisticated as the writings of the authors to whom Gras refers, nevertheless create meaning in the same way. Their writing is diacritical, distinguishing this idea from that idea. The terms they use for what they understand interrelate and collectively explain the meaning

they are trying to convey. For example, to one student "bureaucratic" may be a term used to explain an oppressive situation. Over a period of ten weeks the student's attempt to deal with "the bureaucracy" and her marginal success or failure in this area may represent a record of her attempt to free herself. For another student "bureaucratic" is a way of describing the disorganization of a department. Over a ten-week period the student may "deal with the bureaucracy" by reordering files and planning out an orderly system for implementing the procedures in the future. If one is after a student's real meaning, one has to examine how terms combine, what else the mind selects to go with them, and the progress of these terms over the period of time the student keeps the journal. In other words, one has to listen to what this particular student seems to mean by what he or she says.

The writer of a student log, like the author of a novel, has his or her way of seeing the world. While we do not claim that log entries warrant the same degree of scrutiny as a novel, our approach to them is the same. One log entry is a sample of how the student interprets what is seen in the environment. Ten weeks of that student's log entries gives us a ten-week picture of this. These patterns may be picked up in different ways. If the student is describing a scene or activity, the analysis method can be similar to a literary one.

To find the tone of the passage, the log analyst can look at the setting and the adjectives that describe it; at the people and the way they are presented; at the symbolic meaning of any of the activities described. The log analyst must be sensitive to the way the student has tied all of these elements together--to the collective accretion of sentences whose force ties everything together.

Another entry may fall into an information-giving category; here again the log analyst must be sensitive to the information the student has chosen to give and relate this back to previous entries. If an entry is primarily analytical, what does the writer see as the cause and effect of what is being analyzed? What does the writer see as the reason for being involved? How does he or she summarize or generalize the analysis? If the entries explain a course of action, what kinds of actions are described as being taken? Can one see a pattern in either the position chosen, the approach taken, or the results of the actions? Needless to say, it is hard to ask these questions without comparative data--we do not know what else the student might have presented; but the argument of the literary critics who do similar internal analysis is that the human mind inscribes its "deterministic architecture" everywhere. In other words, how a writer describes his or her world is a self-reflection. A log analyst should be aware of this method of looking at the data in order to determine the particular perspectives from which the writer views his or her experiences; the log analyst must also be aware of the high degree of subjectivity involved and therefore must obtain feedback from the writer in validating the interpretation.

The position of the log analyst fundamentally is to analyze the data based on pre-established learning or course objectives. His concern therefore is not so much with the critical nature of an incident as it is with the analysis of the ongoing process. He must ally himself fairly closely with the objectives of the program in order to get any kind of useful data. As our examination of both Dialogue House and John Duley's approach has shown, one is dealing here not with behavior but with psychological development, and if the data are to have any

value at all, the students must see log-keeping or the process of written articulation as useful--even fundamental--to their own learning and growth.

Our analysis of student logs suggested five broad categories of learning: self-awareness, awareness of others and the environment, skill development, cognitive and academic growth, and career understanding. Log data could be satisfactorily classified within these categories (although a well-reported incident rarely fits one category). For example, a discussion of the bureaucratic structure of the board and care home would fit under "career understanding," but a discussion of how the writer reacted to the bureaucratic structure of the board and care home contained a good deal of "self-awareness." Thus, while our continued use of this classification system with student logs reinforced the validity of these learning areas, it also confirmed our belief that classifying learning (as opposed to classifying the kind of task performance incidents) would require at least a multiple way of registering the incident.

Although the classification system helped us to identify and count the learning activities students engaged in, it did nothing to register the nature of involvement in the activities. It is one thing to say that a student experienced activities which made him or her aware of the environment in which he or she was operating; it is much more difficult to try to abstract how much was understood about the problem or its characteristics. We again analyzed the logs for methods to characterize the degree of understanding and competence students showed about the activities they recorded. Student log entries tended to fall along a progression of understanding resembling the cognitive domain taxonomy (i.e., from presenting knowledge, to analyzing it, and then applying it). (Bloom, 1956)

Modifying Bloom's progression of understandings, we established three levels of competence to register the degree of understanding and competence revealed about a given experience. These levels are: the ability to describe (or being aware and informed); the ability to analyze, synthesize, and generalize; and the ability to take action (or to make a decision on a further course of action).

The first level simply requires the student to single out and relate an experience which could fall within only one category of learning. The second level requires the student to sort out the elements involved in the incident, to recognize the relationships and dynamics among the elements, and to put the incident in a broader context. Such achievement would most likely fall into two or more categories of learning.

The third level is our way of registering whether an analyzed or described activity led to a course of action. This reflects Coleman's thinking described earlier; it is a part of the Bloom taxonomy (Can the student apply what he has learned?); and is recorded often by the students ("having got a hold of what's wrong, I decided to . . ."). In other words, given the learning recorded by the student, was that student not only able to describe or analyze but also able to act or perform on such knowledge? Coleman, as well as Harrison and Hopkins, supports the necessity of registering in our log analysis how and what the student was able to do at the experiential learning site.

Given the learning categories and competence levels, we constructed a two-dimensional matrix (the Assessment Matrix). (See Exhibit B.) Using the content analysis method, learning activities from the log data can be classified and registered on the matrix which provides a summary and profile of

EXHIBIT B.

ASSESSMENT  
MATRIX

|  |  |  |  |  |  |  |  |                   |
|--|--|--|--|--|--|--|--|-------------------|
|  |  |  |  |  |  |  |  | LOG NUMBER        |
|  |  |  |  |  |  |  |  | EXPERIENCE RATING |
|  |  |  |  |  |  |  |  | LEARNING RATING   |

Univ. of California  
Los Angeles  
Experimental Educat'l.  
Programs-  
CAEL Project

LOG PERIOD

COURSE/PROGRAM

NAME

|                               | Self-Awareness | Awareness of<br>Others and<br>Environment | Skill<br>Development | Cognitive Area<br>(Academic) | Career<br>Understanding |
|-------------------------------|----------------|-------------------------------------------|----------------------|------------------------------|-------------------------|
| APPLICATION/DECISION-MAKING   |                |                                           |                      |                              |                         |
| ANALYZE/SYNTHESIZE/GENERALIZE |                |                                           |                      |                              |                         |
| BECOME AWARE/INFORM/DESCRIBE  |                |                                           |                      |                              |                         |

EXHIBIT B (Cont'd.)

Student's Themes and/or Underlying Patterns (If any can be identified):

Identified by (check one) ☐ Student ☐ Log Analyst ☐ Other \_\_\_\_\_

Log Analyst's Comments:

Student's Comments:

Field Supervisor's Comments:

Faculty's Comments:

the student's learning over a given period of time. The use of the matrix also provides a means of comparing learnings of different students.

Taking into consideration the individual differences of writing and learning styles, we have included on our matrix a special section for recording the "tone" of the student's logs. The "tone," as discussed earlier, reflects the student's perspective based on his or her particular set of expectations, motivation, and learning style. This section is not a part of the learning categories or competence levels classification system. However, it provides individual meaning to the classification of learning activities and a way of registering what those classified activities are probably going to amount to for the particular student.

The assessment of student themes or "tone" from the logs relies on impressions and subjective judgments. Establishing reliability in this context presents a problem, as it deals with value judgment. However, it is essential to register this information if we are interested in reading the log data from their intended perspective. Furthermore, we needed an evaluation instrument that would elicit information about the value and worth of our program, which requires informed value judgments. On the other hand, because of the high degree of subjectivity involved, the log writer (i.e., the student) should be trained to re-read the logs and pull out the themes.

### Conclusions

As we approached the end of our study, a model for assessing experiential learning emerged. This model, which is discussed in detail in the next chapter,

emphasizes the learning process as an important assessment consideration. It also suggests that the student and field supervisor, as well as the faculty-instructor, have significant roles in the evaluation.

Based on the aforementioned conclusion, the model involves the following:

1. The use of the Record-Reflection Log to document the learning process.
2. The use of a combined literary and content analysis technique to abstract the log entries onto the Assessment Matrix.
3. The use of the Assessment Matrix to summarize and analyze the log entries for evaluative purposes.
4. The use of a team of judges in the evaluation process, namely: the student as the judge of what and how he or she has learned; the log analyst as the judge of the relationship between the log entries and the course learning objectives or a set of faculty-established general criteria (this function can be performed by one of the other three judges); the field supervisor and faculty-instructor as judges, respectively, of the professional and academic qualities and quantities of the learning experience.

### III. USE OF THE RECORD-REFLECTION LOG AND THE ASSESSMENT MATRIX: A MODEL

In testing and refining the experiential learning assessment model, as presented in this chapter, we have been concerned with the overall effectiveness and the validity of the instruments and the analysis process in reflecting the actual learning experience.

In terms of effectiveness, we have presumed that the Record-Reflection Log and the Assessment Matrix should be vehicles for the following:

- An instrument that encourages and enhances student self-assessment and provides, through the assessment process, enlightenment on what students have actually learned through a given unit of experience.
- A documentation of activities, the learning derived from them, the level of competence, and, indirectly, the learning process.
- A source of information essential for formative and summative program evaluation.
- A source of information for determination of grades and creditation.

Variations of this working model have also been tested by several institutions, taking into consideration concerns unique to a particular program. These variations are discussed in Chapter IV.

As for validity testing, special efforts were made in Phase II of the study to isolate the project log analyst (an independent evaluator) from project sample instructors, field supervisors, and students. The information presented and the conclusions drawn by the log analyst about each of the sample programs and students were based completely on her reading of the log entries and matrix results.

At the end of the fourth week of this phase, the log analyst was able to determine that one of the sample programs was not fulfilling its objectives in three areas--career understanding, self-awareness, and awareness of others and environment. This observation was presented to the project director and eventually substantiated by those directly involved in the sample program in question. Changes made in the program were subsequently reflected in the log. This phenomenon supported our conception that the log and matrix are effective instruments for program implementation evaluation.

Similarly, the log analyst made observations about individual students. These, with no exceptions, coincide with similar observations made independently by field supervisors, instructors actively involved in the field, and the students themselves. In several cases, the analyst had difficulty transferring student log information onto the matrix. After checking with the field supervisors and instructors involved, it became evident that these students were having grave difficulties grasping the concept of experiential learning as an approach to education. These students essentially were not ready to undertake the sample programs' mode of experiential learning as a way of education. Once again, we received positive feedback on the validity of the instruments and on their ability to reflect the individual student's experiential process.

Feedback from other institutional experiences in Phase III has been equally encouraging although the test control was far less stringent. To be sure, however, we have modified the Assessment Matrix further to include more verification data to increase the validity of the documentation.

### Documentation of Learning

In many ways, reports, examinations, and class demonstrations are all methods of documenting a student's learning. These and other practices of documentation should be considered in formulating an evaluation design for any course, including experiential learning courses. However, the Record-Reflection Log, in which the students report their experiences and their feelings about them (see Exhibit A, p. 23), has been designed to capture the quality and quantity of the experiential learning process. The information gathered by the Log is useful for monitoring both individual student learning and course or program implementation.

THE RECORD-REFLECTION LOG IS A DOCUMENT THE STUDENT KEEPS REGULARLY AND IN WHICH LEARNING CONSIDERED BY THE STUDENT TO BE IMPORTANT (OR THE LACK OF IT) IS RECORDED. The Record Section accounts for the actual learning activities engaged in by the student, while the Reflection Section depicts the thoughts, ideas, and questions that grow out of an activity or any combination of activities.

In orienting students to the use of the Log, specific directives need to be given and discussed with them. The instructions and a brief explanation of each point follow:

- A. WRITE DOWN EACH WEEK THAT YOU ARE INVOLVED IN THE COURSE/PROGRAM WHAT YOU THINK YOUR LEARNING EXPERIENCES WERE.

This is not an easy directive to give students. The ease with which they accept it depends largely on the degree of learning autonomy a student has achieved. Those students who have been a part of an environment that respected

their ideas and gave them a chance to incorporate those ideas into the theories and concepts of the discipline they were studying understand the directive. Where students have not received this kind of autonomy, some will ask that the instrument define such terms as "What is learning? What is a learning experience?" and so forth. Other students will regard the Log as another arm of the faculty-grading mechanism and will proceed dutifully to explain the information and ideas presented that week. The problem with either kind of student is the same and hardly new to the educational scene. STUDENTS NEED TO BE ENCOURAGED TO SEE LEARNING AS SOMETHING THAT HAPPENS TO THEM--not simply as a body of knowledge someone else defines for them or lectures to them about.

B. THE LOG SHOULD BE WRITTEN AS IF YOU ARE HAVING A DIALOGUE WITH YOURSELF.<sup>6</sup>

The audience problem--to whom or for whom a student is writing the Log--is also a difficult one. Many students want to feel that they are communicating with a particular person through the Log. They naturally also want feedback on what they have said. But if the Log is looked at as primarily a means of communicating information to a specified faculty member or field supervisor--rather than as a dialogue with the self--the kind of information included will be affected. It is difficult for some students to think in terms of "having a dialogue" with themselves, but again this is what must be encouraged. In the end, such a process will reinforce the learning experiences; as one student so aptly

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<sup>6</sup>For a discussion of this technique, see Shirley Sealy, "Employing the Disadvantaged," A Report on a Unique Job Training Program Sponsored by the New York State Department of Labor, mimeographed (n.d.).

put it, "Participating in this program and writing the logs has helped me crystalize what I had been carrying around in me for years."

C. THE LOG IS A FORMATIVE EVALUATION INSTRUMENT AND AS SUCH IS USED TO PROVIDE INFORMATION ABOUT WHAT HAPPENED TO YOU DURING THIS COURSE OR PROGRAM.

Again this is not an easy concept to communicate to students. They are not accustomed to seeing themselves with an actual role to play both in establishing the information and in finally providing much of the basis for the criteria used to evaluate them. This active role in their own as well as the program's evaluation needs to be explained to them. One can begin by explaining that administrators, faculty, and field supervisors involved in experiential courses need to identify:

1. The actual learning experiences (as opposed to the planned-for learning experiences) students encounter in the program.
2. Those experiences students consider particularly important to them and why.
3. The problem areas the students find in the program. (Here it should be stressed that their documentation of difficulties--particularly negative learning experiences or the lack of learning--helps course planners understand where a course needs to be improved.)

D. THE LOG IS DIVIDED INTO TWO SECTIONS, A RECORD SECTION AND A REFLECTION SECTION.

This division is made for the log analyst's and the student's convenience. Students record their learning activities in the Record Section; in the Reflection

Section they write down the thoughts, ideas, and questions that grow out of an activity or any combination of activities. Students do not have difficulty recording learning activities; they experience difficulty understanding how a reflection is more than a record. It is important to emphasize the distinction between recording learning activities and reflecting on them. This kind of format is convenient for the student. It is not lengthy--it helps the student relate his or her thoughts about the experience to the actual experience. Also, some students find that writing down what happened often jogs their minds. Reflections come freely after that.

For the log analyst, such a format divides up the student's entries into what happened and what a student thought about what happened. It imposes comprehensible order on what might become (given the journal-keeping tradition) a stream of consciousness production. Also, one can easily abstract a list of activities that the students thought were important from the Record Section, if information about the student or the course/program is all that is desired.

E. DO NOT SPEND TOO MUCH TIME ON LOG WRITING.

Log writing is process information, notes and thoughts in passing, not a finished product. A continuous collection of information (thoughts recorded weekly or more frequently over the course/program period) is more useful to the log analyst than a few digested entries.

Some students need to be encouraged to write what "comes off the top of their heads." If they are not encouraged to do so, log keeping becomes a burden requiring too much time and eventually is put off and finally not written

at all. Other students need to be told that this is an instrument to communicate their thoughts, not one that judges their writing abilities; therefore they should not worry about writing skills. In fact, interest and involvement with an idea or problem produces much better log entries than writing training.

The log-keeping process as a means of documenting the experiential learning process needs the support of everyone involved--student participants, field supervisor, faculty sponsor, and others. Students need to be assured that the information they are putting down as being important is indeed important. They need feedback. This can be accomplished at meetings with field supervisors or instructors. Log entries can be sampled randomly and discussed anonymously for the value of their information and insight. Such feedback encourages students to take greater interest and care in keeping the logs.

#### Analysis and Abstraction

Just as the documentation process relies heavily on the participating students, so the analysis of the log entries for evaluative purposes relies heavily on the student with the help of the log analyst.

In our study, we experimented with the use of professional evaluators, faculty-instructors, and teaching assistants as analysts. We rejected the first as too costly, and not particularly more effective. The faculty-instructor and the equivalent of a teaching assistant were both possibilities, with our preference leaning toward the use of an instructor's assistant.

Technically, the log analyst must read logs as an unbiased observer of a student's written log material. Therefore, it is desirable to have someone whose

knowledge of any particular student is confined to the student's written log presentation. The analyst must also be someone who is familiar with the program (or individualized student's learning) objectives.

The analyst's job is to abstract the content of a student's log for specific evidence of learning. It is absolutely necessary that an analyst apply the same analysis criteria to all the logs of all the students. Devising a categorization system and reading for those categories is helpful in achieving consistency, but the categories used must be broad enough to register all possible learning experiences yet specific enough to indicate where a student has and has not registered learning. If the analyst does not follow pre-determined categories, he or she runs the risk of reading the log as one reads any piece of literary matter--and thus losing sight of what is important in this abstraction: the quality and quantity of the learning experiences over a specific period of time.

One categorization system developed from our sample data as shown on the Assessment Matrix (see Exhibit B, pp. 32-33) has proven to be effective and applicable to a wide range of experiential learning programs and courses. An alternative would be to convert the program or student objectives into learning categories in lieu of the categories we have identified. Similarly, specific standards of achievement as dictated by program or student objectives can be used in lieu of the suggested levels of competence. The categorization to be used on the Assessment Matrix should be reflective of the criteria on which one wishes to evaluate the log entries and the expected level of student competence or achievement.

In analyzing logs for learning categories, the analyst looks for the following:

1. Common characteristics among activities a student says were learning experiences. These then are put into categories according to their respective characteristics. For example, activities such as negotiating, leading groups, and interviewing have interpersonal contact in common.
2. The approximate number of particular types of experiences reported. For example, if all or many of a student's experiential activities are involved with planning and organizing a file system in an office then that is what he will learn from the program.
3. The degree of understanding about the experiences the student communicates in his log entry. For example, does he merely register the fact that he had a bureaucratic experience and that it was interesting or difficult, or does he go on to analyze the interesting or difficult aspects of it.
4. The activities in which the student has taken a course of action or made a decision.

The assumption behind the concept of experiential learning is that a student learns by doing; therefore it is important that a record of the kinds and numbers of decisions a student was able to make in the field be included in a major assessment category. It is difficult to determine the point at which a student decides on a course of action. Certainly this category is not as easy to explain as the category of analysis, but the analyst should perceive the kinds of actions a student is taking and the learning areas under which these actions fall. The analyst should register these actions, knowing that for this particular category other expert judgment may be needed.

The analyst needs also to be cognizant of any recurring themes or underlying thought patterns peculiar to the student's log entries and watch how these

develop over the period. For example, a student may believe that every activity must "turn him on." He begins to comment on and to assess his actions, the program, etc. from this vantage point. When he runs into uneventful nonstimulating situations he usually reports them as such and often is surprised later to discover that those situations turned out to have real value. These themes are important because these are what get challenged, modified, discarded, or expanded by the learning process. The analyst who wants to assess the development of one student's process must (a) pick up on these themes, (b) follow what happens to them during a designated period of time, and (c) assess the student's understanding of them at the end. Such themes are equally important in revealing particular perspectives from which the analyst is "analyzing" the data. They must be in agreement with those of the student to assure the validity of the matrix data.

Additionally, the tone of the log entries, if any, should be taken into account whether one is reading the logs for the student's general or specific attitude toward the program. Tone is another element in meaning. Reading for tone reveals a good deal more about what a student is saying or how the attitude of the class is progressing. Readers are often unaware that the written voice indicates as much about what a writer means as the spoken voice. A reader needs to transfer those skills used naturally when listening to someone speaking to the reading process.

As mentioned previously, the identification of any recurring themes and tone in log writing is a relatively subjective exercise. Therefore, this function can and should be performed by the student (the primary source). The assignment,

however, should be given only after the student has completed several weeks of log writing. He or she could then re-read the logs to pick up any special themes. To pick up the underlying thoughts and tone, the student should ask questions about:

- The nature and degree of his or her involvement in, and understanding of, the material reflected by the log. This includes the student's particular interest, enthusiasm, emotion, and confidence, reflected in the writing of the log.
- The nature of changes in the writing over a period of time. Items that can be noted include changes in attitude, increased involvement, growth in confidence, periods of confusion, discouragement, and so on.

An alternative to the use of students in identifying underlying themes is the use of the log analyst. To assure the accuracy of the log analyst's inferences, students (as well as faculty and field supervisors) should be given an opportunity to comment. This has been taken into consideration by providing space for feedback comments as part of the Assessment Matrix instrument.

While recurring themes and tone provide added documentation to students' learning, not all log writing has detectable themes. This should not necessarily lead to negative implications. As long as students are given, and in fact exercise, discretion in what they enter into the log, they must have specific perspectives or "hidden agendas," from which they are encountering the field assignment. Given the observation from our study, the use of students to identify the "tone" of their own logs is especially valuable for added educational impact on the students involved. Such exercises increase the student's self-awareness and self-understanding, especially in relation to the learning

experience reflected in his or her logs. Therefore, the re-reading of one's own logs over a period of time can be, and is, in itself an enlightening experience.

### Judgment

Although the Record-Reflection Log and the Assessment Matrix provide valuable information for evaluation, they are merely instruments. Judgment has to be exercised by people. In deciding what to put in the log, the student exercises judgment on what he or she considers as learning. In analyzing the log writing, the log analyst exercises judgment on the meaning of the log writing.

The judgment of the overall quality or quantity of the learning experience lies with the faculty-instructor and the field mentor, whose respective expertise as academician and practitioner provides the criteria for assessment. Equally important, the objectives of the course or program as well as those set by the students should be used as criteria. All of these criteria must be established by those involved, preferably prior to the start of the experience.

The log and matrix data, however, can facilitate this process of judgment, whether it is for the purpose of implementing evaluation, monitoring student progress, or both. This facilitation is accomplished by a systematic reading of the prevalent themes and common concerns registered in the log entries and abstracted onto the matrix.

The student self-reported log entries provide valuable program implementation data. It is important to remember that in experiential learning programs even the field mentor is not around all the time and may only find out about a student's

activities when the student has a problem. Only the student knows what experiences he or she has had at the field site, and only he or she really knows which ones were learning experiences. The instructor or program administrator may have decided what a student should encounter in a particular experiential opportunity, but only the student knows what he or she actually encountered. Based on the information provided by the student logs, program administrators or course instructors may want to alter the plan and expectations of the course, or try to alter the situation at a particular field site to fit the course's expectations. In either case, the logs are an excellent way of monitoring the program.

The student's progress data--his or her 10-15 weeks of log entries as indicated on the matrix--are good indicators of what the student is understanding. They register the important field experiences he or she has had and the particular ways he or she sees the experiences. Given a review of the matrix based on a collection of student log entries, it is not hard to identify the kinds of experiences and the progression of experiences that a student is having. In addition, the underlying theme or tone is a good indicator of what an individual student will decide he or she has learned. For example, a student preoccupied with order, efficiency, and good planning will perceive these needs in the project he or she is working on, will emphasize them in his or her efforts to carry out the project, and will search out ways to plan and then order material. The student's final project then will reflect the preoccupying theme of order, and given the log-entry material, course decision makers will have a good picture of what this student has done in the experiential learning course. If this theme is

identified by, or for, a particular student during the course of a program, it is possible either to encourage and broaden or to change the direction of a student's emphasis.

For this process to have real value, one must respect the instrument and the idea that a process document (i.e., a series of logs) can show a great deal about the actual learning taking place in a particular program. Be open to the information gleaned from the logs or registered on the matrix. This requires two things: a respect for the students and what they say they are learning, and a willingness to accept the developmental theory of student learning. Ideas, scattered thoughts on a wide range of topics, cannot always be analyzed clearly. Students keeping logs are supposed to have a 10-15 week period in which these ideas grow, change, and finally jell. This kind of course documentation records the growth of their understanding.

The logs abstracted on the matrix together reveal the particular growth patterns of the students and by aggregating the kinds of activities mentioned by the students can give course administrators and faculty a reading on what is getting through to the students. Therefore, there is no reason why such documentation cannot be considered a way of monitoring student progress.

### Illustrations

One example from each of the three experiential learning programs used in our Phase II sample has been chosen to illustrate the utility of the evaluation model we have just described. Each example includes a brief introductory statement from the student, excerpts from his or her log entries, and comments from the log analyst or instructor.

● EXAMPLE FROM ENGLISH COURSE

Introductory Statement. I am Amy, I want to be an author so I need to get as much experience and develop as many writing skills as I can. English 136--the editing and publishing course--helped me do just that.

Log Entry Excerpt. . . . worked as an intern at Sage Publications for the first time today . . . Took me an hour to read and abstract and type the article they gave me, but I felt so proud when I was done. . . . Second day I was assigned to write a story for Sage's Urban News Research Letter. This is where I got my real learning experience . . . I had to read the article and summarize it so that it would fill up a half page of Sage's newsletter . . . Every week I learn how to do something else so consequently I'm developing more confidence in my own abilities.

I'm the senior editor for my project manuscript . . . I'm frustrated because I'm having lots of trouble with my group . . . But I'm learning from it. Especially how to be an effective leader.

Instructor's Comments. As Amy's instructor I find her logs capture her enthusiasm at being able to apply the skills she acquired in the classroom to the tasks important to her professional goals. Working with professionals is particularly important to students in traditional liberal arts disciplines such as English. Amy's log also reveals her increased understanding of the complexity of editing as well as the team work and dedication it requires.

● EXAMPLE FROM INTRODUCTION TO EXPERIENTIAL EDUCATION COURSE

Introductory Statement. I am Mike and am interested in a political career. Naturally I want to find out about effective ways of dealing with the citizens. I thought studying the Mayor's Open House Program--working with the Mayor while he meets with the public and discusses their needs and desires--would tell me some things I needed to know about city government. My real experience was a lot different than I thought it would be.

Log Entry Excerpt. Looking over past Open House files I was astonished at the disorganized and incomplete way most cases were handled . . . there's not enough follow-up . . . a case would be marked closed before waiting to see if the agency they sent it to did anything . . . I recommended a screening process so that citizens with legitimate problems could be given first priority. For the people who just want to see the Mayor we could have an assembly line system . . . the Mayor

could shake each of their hands and send them on their way. Grace, my field mentor, likes my ideas but gave no hint as to whether they would ever be implemented.

Log Analyst's Comments. Mike had more of a bureaucratic experience than a political one. All his comments deal in one way or another with order and disorder--with efficiency. He discovered the administration of the Open House is disorganized and proceeded to devise a plan to deal with it.

Instructor's Comments. As Mike's instructor the independent conclusions drawn by the evaluator are not surprising to me. Mike did not have much of an opportunity to discuss the value of the Open House with either the Mayor or his aides. Most of his involvement was with the physical arrangements. Mike has a strong interest in structure and organization. This started to become evident when Mike chose a faculty mentor from the Graduate School of Management rather than Political Science and a field mentor who is a civil servant, not a politician.

#### ● EXAMPLE FROM SERVICE-LEARNING PROGRAM

Introductory Statement. I am Becky. I have been involved in experiential learning longer than most UCLA students and in a very intensive way. I have been a University Year for ACTION volunteer in UCLA's Program GROWTH, a service-learning program in community mental health. As a result of my GROWTH experience, I have learned a great deal.

Log Entry Excerpt. . . . I must continually examine whether or not I'm actually making decisions for others, doing things for them that they should do, fostering their dependence on me--or truly helping them to stand on their own feet, learning to make their own decisions, teaching them to take responsibility for their own actions. It really concerns me. I know how much effort it takes for me to keep my own awareness sharp.

. . . All I can say is WOW! Last night I spent four hours on a locked ward . . . in the . . . County-General Psychiatric Unit . . . I'd heard about such a scene but guess I didn't really believe it . . . hooks with straight jackets . . . crying, shouting and the slap-slap-slap of slippers. . . up and down the corridor . . . the slamming of doors--sounded just like jail . . . I can imagine the effect on someone brought in because they were upset. How can this environment help anyone?

. . . I went out to the hospital to visit Tup yesterday . . . She showed absolutely no remorse--except for having failed in the suicide attempt. It was a real problem for me in "deciding" how to act. Didn't want to be manipulated or appear reinforcing--but couldn't very well act as though nothing had happened . . . Must honestly admit that suicide is one thing I cannot relate to--but must accept that others view it completely differently.

Log Analyst's Comments. Becky discovered a lot about herself and others . . . Becky puts a lot of importance on self-management and self-development--whether it's her own, her fellow student volunteer's or the client's. Becky also incorporates real-life experiences in her attempts to understand theoretical problems.

These three students had three different projects and three very different experiences. The Assessment Matrix categories were capable of accounting for each of the learning experiences and yet able to provide common denominators (i.e., learning categories) for comparison of the three experiences.

Exhibit C (pp. 55-61) is an example of five consecutive weekly logs beginning with the third week of a student's internship in city planning and a completed Assessment Matrix based on the student log entries. In reviewing the Matrix, the following should be noted:

- The number before each notation of learning refers to the week in which the learning was registered on the log. (This enables the reviewer to refer back to the log for more information, if needed.)
- As summarized by the analyst's comments (and should be self-evident by an examination of the matrix entries or the logs), the information is indeed a documentation of learning and valuable in determining student progress and achievements.
- The entry made in Week #7, "run out of things to say about data collection," provides a clear indication to field supervisor and instructor that the student should be moving on to other activities, as he seems to have exhausted all learning possibilities from collecting data.

Though one student's logs and matrix cannot be the basis for program evaluation, collectively matrices from an adequate sample of students in the program can. If, for example, one of the objectives of the city-planning programs is to introduce the variety of theories underlying the need for

city-planning and its social impact on the city, such learning would have shown up in the Cognitive Area of the Matrix. If most matrices of sample students show none to few entries in this category, then this would indicate that the field experiences provided are deficient as a vehicle for student learning as originally conceived.

As illustrated, the Record-Reflection Log and Assessment Matrix can serve as monitoring instruments on the experiential progress of individuals and on a group as a whole, i.e., as formative program evaluation tools.

Coincidentally, but importantly, we have discovered that information from a few students' log entries cannot be abstracted for placement on the Matrix. A check with instructors of these students has revealed that the students were performing unsatisfactorily in other phases of their course. This phenomenon has helped us gain greater insights into the readiness level of students to undertake experiential learning. Data collected from the logs and the matrix instrument should be very helpful in the development of student selection criteria for experiential learning courses and programs.

#### Summary

The evaluation model described in this chapter provides some recommendations on evaluating experiential learning using the Record-Reflection Log, the Assessment Matrix, and a team of judges which includes the participating student, a log analyst, the faculty-instructor, and the field mentor-practitioner.

The log is intended to be an open-ended instrument which encourages students to report all "relevant learning and experiences" rather than those deemed appropriate by the instructor. The matrix is intended to summarize the log

entries in accordance with whatever criteria have been established for the course or in accordance with some broad categories as recommended in this chapter. The recommended roles of the respective judges are intended to provide the maximum use of their unique expertise.

EXHIBIT C  
SAMPLE OF COMPLETED LOGS AND MATRIX

#3

RECORD AND REFLECTION LOG

Dates 2/11/76 for  
wk. 2/4-/10

Course/  
Program City Planning

Name G.C.

This log should be used to record your learning experiences and the ideas you have about them. It should be filled in at the end of each week (or more frequently) in which you are involved in your experiential learning course or program. Please try to be as candid as you can. Use the back of this page and any additional pages for more writing space, if necessary.

- I. Record or list the course/program activities and experiences you have been involved in today.

*Research and copy the addresses of the 1975 arrest in City WB for a city planning land-use study.*

- II. Reflect upon the above and, using the space below, explain those thoughts, ideas, concepts, or questions which have grown out of the activities and experiences you have recorded.

*The idea that clerical work is necessary in an administrative agency is self-evident. I have assumed the duties of the clerk for the Planning agency and am now engaged in the elemental research of primary sources that is necessary to begin an authoritative study such as the land use study of our office.*

- III. Rate your course activities during this period as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

- IV. Rate the extent to which this course during this period contributed to your own personal growth and development as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

## RECORD AND REFLECTION LOG

Dates 2/22Course/  
Program \_\_\_\_\_

Name \_\_\_\_\_

This log should be used to record your learning experiences and the ideas you have about them. It should be filled in at the end of each week (or more frequently) in which you are involved in your experiential learning course or program. Please try to be as candid as you can. Use the back of this page and any additional pages for more writing space, if necessary.

- I. Record or list the course/program activities and experiences you have been involved in today.

*I am collecting addresses from the fire and police captains on last years activities of their departments.*

- II. Reflect upon the above and, using the space below, explain those thoughts, ideas, concepts, or questions which have grown out of the activities and experiences you have recorded.

*I received invaluable insights into city record keeping data collecting and use. We will use this data to compile a working model of CITY WB land use of 1975. This will aid us in determining those areas of future needs that require attention. As a City Planner, this type of work goes directly to the heart of the job; the final question regarding the future direction of the city.*

- III. Rate your course activities during this period as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

- IV. Rate the extent to which this course during this period contributed to your own personal growth and development as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

## EXHIBIT C (Cont'd.)

#5

## RECORD AND REFLECTION LOG

Dates 3/3/76Course/  
Program \_\_\_\_\_

Name \_\_\_\_\_

This log should be used to record your learning experiences and the ideas you have about them. It should be filled in at the end of each week (or more frequently) in which you are involved in your experiential learning course or program. Please try to be as candid as you can. Use the back of this page and any additional pages for more writing space, if necessary.

- I. Record or list the course/program activities and experiences you have been involved in today.

*I collected 2200 addresses of fire and police calls for 1975 in the City WB.*

- II. Reflect upon the above and, using the space below, explain those thoughts, ideas, concepts, or questions which have grown out of the activities and experiences you have recorded.

*I'll use this to extrapolate information on the difficult and surplus areas of City WB. Later, we will make decisions regarding the availability of options to improve neighborhoods.*

- III. Rate your course activities during this period as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

- IV. Rate the extent to which this course during this period contributed to your own personal growth and development as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

## RECORD AND REFLECTION LOG

Dates 3/10/76Course/  
Program \_\_\_\_\_

Name \_\_\_\_\_

This log should be used to record your learning experiences and the ideas you have about them. It should be filled in at the end of each week (or more frequently) in which you are involved in your experiential learning course or program. Please try to be as candid as you can. Use the back of this page and any additional pages for more writing space, if necessary.

- I. Record or list the course/program activities and experiences you have been involved in today.

*I'm still working on our dept. survey of fire and police calls. I've plotted most of them on a map and am 90% on the way to completion.*

- II. Reflect upon the above and, using the space below, explain those thoughts, ideas, concepts, or questions which have grown out of the activities and experiences you have recorded.

*I'm still in the data accumulating stage of my work. This work is particularly tedious but it is necessary for our final planning recommendations to City Council. So, I will begin to analyze and interpret the results of this raw data. This will be the real beginning of my internship.*

- III. Rate your course activities during this period as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

- IV. Rate the extent to which this course during this period contributed to your own personal growth and development as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

## RECORD AND REFLECTION LOG

Dates 3/16/76Course/  
Program \_\_\_\_\_

Name \_\_\_\_\_

This log should be used to record your learning experiences and the ideas you have about them. It should be filled in at the end of each week (or more frequently) in which you are involved in your experiential learning course or program. Please try to be as candid as you can. Use the back of this page and any additional pages for more writing space, if necessary.

- I. Record or list the course/program activities and experiences you have been involved in today.

*I'm still collecting the information for our land use plan.*

- II. Reflect upon the above and, using the space below, explain those thoughts, ideas, concepts, or questions which have grown out of the activities and experiences you have recorded.

*I've run out of things to say about this activity.*

- III. Rate your course activities during this period as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

- IV. Rate the extent to which this course during this period contributed to your own personal growth and development as: (please circle one)

|           |      |      |      |           |            |
|-----------|------|------|------|-----------|------------|
| Worthless | Poor | Fair | Good | Very Good | Invaluable |
| (0)       | (1)  | (2)  | (3)  | (4)       | (5)        |

| BECOME AWARE/INFORM/DESCRIBE                                                                                                                                                                                                                                                               | ANALYZE/SYNTHESIZE/GENERALIZE                                                                | APPLICATION/DECISION-MAKING |                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------|
| <p>6. Data collecting work is potentially tedious but is necessary; internship has not really begun.</p> <p>7. Run out of things to say about data collection.</p>                                                                                                                         |                                                                                              |                             | Self-Awareness                      |
| <p>3. Clerical work essential to city-planning type research.</p>                                                                                                                                                                                                                          | <p>4. Valuable insights into city-record keeping and its value to city-planning studies.</p> |                             | Awareness of Others and Environment |
| <p>3. Elementary research of primary sources for city-planning study.</p> <p>4. Collecting addresses must come first toward compiling a working model of land-use.</p> <p>5. Use collected data to extrapolate surplus resources, etc.</p> <p>6. Plot data on map; ready for analysis.</p> |                                                                                              |                             | Skill Development                   |
|                                                                                                                                                                                                                                                                                            |                                                                                              |                             | Cognitive Area (Academic)           |
| <p>3. City planning studies involve clerical work.</p> <p>4. Such studies involve collection of primary data such as addresses and telephone calls, etc.</p> <p>6. Restated the less glamorous aspects of work involved.</p>                                                               |                                                                                              |                             | Career Understanding                |

EXHIBIT C  
(Cont'd.)

[illegible]

Univ. of California  
Los Angeles  
Experimental Educat'l.  
Programs-CAEL Project

EXHIBIT C (Cont'd.)

Student's Themes and/or Underlying Patterns (If any can be identified):

Identified by (check one) ☐ Student ☐ Log Analyst ☐ Other \_\_\_\_\_

*None detected*

Log Analyst's Comments: *These weeks have been spent collecting data; student finds the activity tedious but recognizes its value and necessity in relationship to city-planning and land use.*

*Student, though finds his experience thus far as "fair," acknowledges "very good" ratings toward his learning and personal growth.*

Among the identifiable learning gains include: - *skills in conducting land-use and city planning studies, to include collection of primary source data, types of data needed, plotting of data on map and extrapolation of inferences from data*

Student's Comments:

- *insights into activities involved in land-use/city-planning functions*

- *appreciation of record-keeping*

Field Supervisor's Comments:

- *sense that such work is tedious for him, though expects higher level of work in this area may be more to his liking.*

Faculty's Comments:

#### IV. ADAPTATIONS OF THE MODEL

In the design of the model for documenting and assessing sponsored experiential learning, a wide range of programs and needs were taken into consideration. To be sure that the model has the needed adaptability, we followed several institutional adaptations to determine their respective effectiveness. Three variations are reported in this chapter.

##### Use of Logs for Self-Assessment

Although cooperative education programs were one of the first experiential learning opportunities for students, they still encounter many problems. The problem of ensuring the quality of a work experience is, perhaps, a perennial one. Once placement is made, students in most cases are isolated from direct campus contact and faculty support and supervision. Because of this distance or isolation, students must function more independently and have to take on a large part of the responsibility for acquiring a quality work experience. To assume this responsibility effectively, students need to know what is happening to them in the work environment and how it is affecting them as individuals with specific expectations from the cooperative education program.

In addition to the problem of monitoring the work experience, too frequently students have difficulty relating the academic curriculum to the work experience. While both faculty and field supervisors can assist the student, once again because of the separation from campus, the students are left with the burden for their own learning. Students receive large doses of academic learning while on campus and large doses of practical experience while at work; seldom do all three parties involved meet to discuss the relationship between the two.

To deal with these two problems, community college students enrolled in a business cooperative education program, have been asked to use the Record-Reflection Log. Underlying this requirement are two assumptions. First, we assume that the writing of the Record-Reflection Log will trigger a formative self-evaluation process by the student. Information derived from the process will provide valuable information about the field experience in relation to the student's personal goals. Second, we assume that a peripheral outcome of this practice will be the generation of regular communication from the students to the campus. This communication can then provide formative evaluation data on the program and students for the faculty and program coordinator.

Initially, participating students used the Logs on a daily basis. This format, however, had to be changed. Students found it difficult to "reflect" meaningfully given the daily time constraint. Modifications were made which resulted in daily recording of activities with weekly (or more frequent) reflection.

The feedback from this pilot study has been most encouraging in resolving the problems noted earlier. The campus coordinator for this cooperative education program commented, "I look on the CAEL Record and Reflection Log form as the first step forward leading to a successful marriage of both informal and formal learning experiences." A student echoed similar sentiment by saying, "The strength of the log most apparent is that by reflecting on activities during the day/week I find myself becoming more aware of how these activities fit together with the learning program I am involved with. Incidents that may have gone by as taken for granted or unimportant are brought into focus as learning situations."

A second student stated the value of keeping logs in another way:

I have found that reflecting upon and questioning my activities has allowed me to learn. In using the log this way, I have been forced to look at some of my activities in a way I might not have if it were not for the log. I suppose I have always thought about things before I did them but never realized the value of giving thought to them afterwards as a way of learning. . . . I have even told my supervisor at work about the log and how I have come up with some good ideas in our business by reflecting upon and questioning my daily activities.

As illustrated by these comments and the log writings, the use of Record-Reflection Logs does initiate a self-assessment process which in turn provides a seldom neglected learning experience.

#### Use of Logs in Enhancing the Learning Process and Improving Faculty Participation

Bethany College, a small liberal arts institution, established a "practicum program" designed for students to assess their values and attitudes in four areas of life--citizenship, recreation, intercultural, and vocational. (See Appendix A for a description of the program.) The educational impact of the program was not reaching all its potential as conceived. The coordinator then introduced the use of the Record-Reflection Log in hopes of "enhancing the learning process" and putting a greater share of the assessment responsibility on the students. He also encouraged the use of the log entries as the basis for the final student/faculty-advisor meeting so that they could review the pre-planned goals and those actually achieved through the practicum. It is assumed that such a meeting would be much more meaningful than one in which the advisor checks off a list of goals achieved, with relatively little or no exchange between the student and faculty-advisor.

Students participating in this pilot practice submitted two log exercises prior to the mid-point assessment and two log exercises afterwards within a one-month practicum project. The matrix was not used, since there were only four log writings involved for each student.

The program coordinator indicated that the experience of using "log-reflection" has been generally favorable for both the students and faculty, based on feedback from participants:

Previously, the only thought reflection technique used was the daily diary or log, mostly repetitive and usually boring. The students felt that the materials (i.e., Record-Reflection Logs) enabled them to focus on changes in their values and attitudes. Since the experiences were fulfilled in one month's time, the students used calendar divisions for their use, rather than logging critical incidents.

The faculty-advisors welcomed the log writing as the basis for reviewing the achievement of planned goals and for identifying additional learning that had taken place during the practicum. For the students, the process of reviewing and extrapolating educational achievements from the logs with faculty assistance was in itself a valuable experience. For the faculty-advisors, participation in this process was much more compatible with their educational role than previously required.

#### Use of Modified Log and Matrix for Unique Programs

At the University of Minnesota, there is a unique undergraduate program known as the Clinical Instrumentation Systems Program offered by the University College. The research staff involved in the program has modified both the Record-Reflection Log and the Assessment Matrix for program use in assessing specific program objectives established for the hospital observation quarter.

For the modified log, the concept of "record" has been retained while the idea of "reflection" has been expanded to analysis and suggested solutions for technical problems derived from the observation (see Exhibit D). Furthermore, the

EXHIBIT D\*

RECORD AND REFLECTION LOG

Date \_\_\_\_\_

Clinical Instrumentation Systems

University College, University of Minnesota

Name \_\_\_\_\_

This log should be used to record your observations and the ideas you have about them. It should be filled in at the end of the week and turned in to your course instructor. Please try to be as candid as you can. Use the back of this page for additional writing space, if necessary.

- I. Record or list the activities and experiences you have observed this week. Please include the name of the hospital department.
  
  
  
  
  
  
  
  
  
  
- II. Analyze the above, explaining your thoughts, ideas and questions which have grown out of these observations. Be sure to include any technical problems that you can see might arise.
  
  
  
  
  
  
  
  
  
  
- III. Suggest solutions to the technical problems you have described above.
  
  
  
  
  
  
  
  
  
  
- IV. I would rate this week's observation activities as: (please circle one)  

|      |      |      |           |            |
|------|------|------|-----------|------------|
| Poor | Fair | Good | Very Good | Invaluable |
|------|------|------|-----------|------------|
  
- V. I would rate the extent to which this week's course contributed to my own personal growth and development as: (please circle one)  

|      |      |      |           |            |
|------|------|------|-----------|------------|
| Poor | Fair | Good | Very Good | Invaluable |
|------|------|------|-----------|------------|

---

\* Courtesy of University College, University of Minnesota

log is based on active observation rather than actual involvement. Finally, the logs are kept on a weekly rather than daily basis.

As for the matrix (see Exhibit E), the two-dimensional concept with learning categories and competence levels has been retained. However, the specific learning categories and competence levels have been changed to specifically reflect program objectives. The instructor in charge is responsible for abstracting the log information onto the matrix for each student weekly. The abstracted information is then used by the instructor for formative evaluation of both the program and the individual student's observational experience.

This modified evaluation design has proven to be effective. As summarized by the research staff, "Students reported they found the Log useful and easy to work with. The Matrix proved to be very helpful in assessing students' experiences and in providing data for documentation and development of the program." The brief research staff report on this project is included as Appendix B.

### Conclusion

As hoped, the model for documenting and assessing sponsored experiential learning does have the adaptability needed to address a variety of evaluation concerns. Three examples have been presented. One involves a community college and a cooperative education program. Another deals with a small liberal arts college which requires experiential learning in the form of a "practicum" for graduation but not for academic course credit. The third involves a professional undergraduate program leading to a B.S. degree offered through a public university. Each of these examples can be generalized and adapted by others.

EXHIBIT E\*

Evaluation of Student Weekly Logs

\_\_\_\_\_  
Clinical Instrumentation Systems  
 University College, University of Minnesota

Professor \_\_\_\_\_ Date \_\_\_\_\_

Student \_\_\_\_\_

|                    | Patient's<br>Environment | Medical<br>Environment | Technical<br>Environment |
|--------------------|--------------------------|------------------------|--------------------------|
| Describe           |                          |                        |                          |
| Analyze<br>Problem |                          |                        |                          |
| Solve<br>Problem   |                          |                        |                          |

\* Courtesy of University College, University of Minnesota

## V. IMPLICATIONS FOR ASSESSING PRIOR EXPERIENTIAL LEARNING

The model discussed in this report has been developed for documenting and assessing sponsored experiential learning. There are, however, some useful implications for those involved in the evaluation of prior experiential learning. These implications have been derived from discussions with persons extensively involved in the evaluation of prior experience for educational credits.<sup>7</sup> One of the considerations is to adopt the concept of "reflection" in the writing of a narrative which is included in portfolios submitted for evaluation of prior learning. The other is the use of a matrix in summarizing data from the portfolio and therefore increasing the reliability and validity of the reviewing process.

Current practices in evaluating prior or non-sponsored learning focus on the development of a portfolio as the documentation data for prior learning. One or more evaluators review the portfolio for verification of competences and learning outcomes claimed by the student. The certified educational achievements are then translated into academic credits according to standards which vary from institution to institution.

The portfolio usually contains the following:

. . . a resume listing the student's educational, employment, community, or volunteer experiences, and other pertinent data; a narrative that is usually

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<sup>7</sup>Myrna R. Miller, Coordinator of Assessment Services of the Office of External Programs at Vermont State Colleges, provided the impetus and much of the content for this chapter. Many of the undocumented quotes in this chapter are drawn from correspondence the author had with Ms. Miller.

autobiographical in tone and contains the student's implicit or explicit claim to learning; a statement requesting credit in a specific subject area or recognition of one or several competences; and a set of documents, such as letters of verification and job descriptions, that provide evidence that the experiences emphasized by the student in the narrative did indeed take place. (Forrest, Knapp, and Pendergrass, 1976, p. 162)

Aside from the "narrative," all other items in the portfolio are simply manifestations that certain activities or experiences have taken place. This poses a significant problem for the evaluators as they are expected to certify learning and not mere involvement in a series of activities. Heavy reliance, therefore, has been placed on the narrative for inferences of learning. Unfortunately, most narratives are poorly developed. They are usually "a muddle of recording and reflecting." The muddling characteristics are carried over to the reviewing process. Evaluators find themselves using primarily innate judgment as opposed to established and standardized assessment in reviewing portfolios.

#### Use of Reflection in Developing Narrative

Students, in the process of developing narratives for their portfolio, may benefit from guidelines similar to those used by students in Record-Reflection Logs. These guidelines provide students with a system for sorting out memories (past reflections) of recorded experiences. Perhaps even more significantly, such an exercise requires students to reflect now on past experiences. Frequently, the process of current reflections culminates into further enlightenment worthy of creditation.

The theoretical base on which the reflection concept has been developed applies to assessing learning from prior experiences. The learning process, in this case, has been initiated with the "prior experience." The learning (theoretical and generalized understanding) derived from it may also have occurred in the past and therefore should emerge from the student's memories of his or her past experience. On the other hand, "these intellectual leaps may actually occur during the reflection necessary for preparation of the portfolio," thus the importance for current reflection on past experiences.

#### Use of the Matrix in Review of Portfolios

The faculty evaluators of portfolios have been applying many of the techniques described in our model for analyzing log material. However, in most cases, these applications are used unconsciously, inconsistently, and arbitrarily. Myrna Miller suggests that the evaluators act in the "log analyst" role and use the matrix in reviewing portfolios. The evaluator would read "a portfolio for the themes which developed chronologically, . . . for indications of present cognitive or affective skills and abilities demonstrated in the analytical reflection." The evaluator could sort out these accomplishments using a carefully developed matrix. The matrix could be developed in accordance with learning areas for which a student wishes to be awarded credits, or in accordance with the types of learning the institution recognizes for credit. The adoption of the analysis techniques and matrix from the model should increase both the validity and reliability of the assessment.

These implications by no means are offered as solutions to assessment of prior learning but are suggested as considerations for further study.

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A P P E N D I X    A

MATERIALS FROM BETHANY COLLEGE PRACTICUM PROGRAMS

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CENTER FOR PRACTICUM PROGRAMS  
BETHANY COLLEGE

What Are Practicums?

Practicums provide students with an active, experience-based component of their liberal arts education. Students in turn will increase their self-awareness as individuals and members of society. Practicums have been developed under the general headings of (1) health, physical education, and recreation, (2) citizenship, (3) intercultural experience, and (4) vocational experience, which collectively are an integrated component of the Bethany College curriculum and contribute toward the student's role as a life-learner.

What Are The Basic Guidelines For Participation?

Every student who registers for classes at Bethany College is required to undertake practicums in each of the four areas. Students are encouraged to begin their practicum involvement as soon as practical, hopefully during the freshman year. The student selects the best time period, based on his/her interests and needs, to undertake each practicum and still complete all four practicums by graduation.

REMEMBER: All practicums must be pre-planned (i.e., the proposal must be approved by the practicum advisor and Committee before the practicum experience begins). Students should follow procedures outlined on each practicum form in carrying out practicum responsibilities.

Each practicum proposal should be based on three elements: the student's interests and academic preparation, his/her personal needs, and the proposed practicum activities and/or placement. The four practicum headings are general in meaning and intent, to provide for more flexibility in developing a practicum proposal. An acceptable proposal is theoretically limited only by the considerations mentioned above, as well as the imagination of the student and advisor working together.

What Are The Responsibilities Of The Involved Parties?

A. The Center For Practicum Programs will undertake to:

- 1) provide consultation services concerning the Practicum Program (i.e., counseling with students, curriculum coordination, placement descriptions and evaluations) for both the academic and placement communities.
- 2) develop placement opportunities for students in cooperation with academic departments and community organizations (i.e., government agencies, private business, state and nationwide programs).

- 3) develop and maintain for Bethany students a college-wide placement file for practicums.
- 4) assist academic departments with student placement.
- 5) conduct training workshops for students on practicum proposals and evaluations.
- 6) develop and distribute handbooks and other resource materials on the Practicum Program (i.e., objectives, procedures, evaluation, and the like) to students, faculty, and employers.
- 7) provide public relations services (i.e., talks and presentations, brochures, newspapers).

B. Faculty Advisors at Bethany College are encouraged to:

- 1) work with students on such things as counseling, developing specific learning goals, acting as practicum advisor.
- 2) carry through on evaluation procedures that are necessary after the completion of the practicum (i.e., discuss with the student the learning goals, required assignments, etc., as part of the evaluation process).
- 3) work with the Practicum Committee and the Center For Practicum Programs on any procedural and policy matters concerning the Practicum Program.
- 4) become involved in some development of practicum placement sites.
- 5) work with students to integrate practicums with classroom skills and knowledge, and department internships.

C. Students will have successful practicum experiences only if they:

- 1) work with the practicum advisor to develop learning goals and undertake to fulfill these goals at the practicum placement.
- 2) assume responsibility for all written assignments, practicum activities, form signatures, and deadlines related to practicum requirements.
- 3) use imagination and initiative in developing practicum placements as much as possible. The Center For Practicum Programs and faculty will assist you on this matter.

- 4) assume responsibility for setting up an interview with the placement supervisor when required.
- 5) before starting the practicum, be sure the practicum advisor, the placement supervisor, and himself/herself fully agree on the learning goals.

D. Placement Supervisors can contribute to a student's educational experience in the following ways:

- 1) during the preliminary placement interview with the Director of the Center For Practicum Programs, the placement supervisor may offer ideas concerning learning possibilities at the placement site.
- 2) the placement supervisor should communicate to the student whether his/her office or agency can fulfill the needs of some or all of the learning goals.
- 3) the placement supervisor may offer alternative learning activities for consideration by the student and/or practicum advisor.
- 4) the placement supervisor should relate to the student what expectations the employer/supervisor has for the student. This would include outlining to the student rules and regulations of the placement organization.
- 5) the placement supervisor should provide adequate supervision for the student.
- 6) the placement supervisor should consult with the Center For Practicum Programs and/or the practicum advisor concerning any problems that may arise pertaining to the student's work or placement.

What Are The Benefits For The Involved Parties?

A. For the student, the Practicum Program:

- 1) provides an experiential learning situation.
- 2) provides an opportunity to explore and test out occupational choices.
- 3) provides an opportunity to examine values and attitudes, as they relate to life, in a reality-based setting.
- 4) provides an opportunity to examine the value of a liberal arts education as a way of life.

- 5) assists in the development of self-confidence and self-worth.
- 6) enables him/her to achieve more completely the educational goals of Bethany College, in concert with other programs within the Bethany Plan.
- 7) helps to bring together classroom instruction and life experience by bridging the gap between theory and practice.
- 8) provides for a smoother transition from the role of institutional learner to life learner.
- 9) enables him/her to develop and refine interpersonal skills.
- 10) supplements financial resources in some cases.
- 11) provides opportunities for full-time and part-time placements.
- 12) gives an orientation to the work world.

B. For the community, the Practicum Program:

- 1) better prepares future leaders to assume their community responsibilities.
- 2) contributes toward community progress by utilizing student skills, knowledge, interest, etc. for constructive activities and jobs.
- 3) provides placements with an opportunity to place students in entry level positions or on special projects, thereby utilizing highly trained personnel in more specialized work.
- 4) provides capable and enthusiastic workers with little recruitment costs.
- 5) allows for careful screening of students as possible future employees.
- 6) reduces the cost of training future employees in many cases.
- 7) contributes toward community goodwill through sharing in the educational and personal development of college students.

C. For the institution, the Practicum Program:

- 1) enables Bethany College to provide worthwhile learning experiences that cannot be duplicated on campus.

- 2) recruits new students to Bethany College.
- 3) increases student satisfaction with their education program, thereby increasing retention in the college program.
- 4) provides a vehicle for the establishment of positive relationships and interaction between Bethany College and the community at large.
- 5) provides an opportunity for alumni, as practicum supervisors, to participate in the educational process at Bethany College, thereby creating stronger alumni concern for the future growth of Bethany College.
- 6) helps the college to keep curriculum relevant; students often return to classes with up-to-date information on employer's practices and new technology.
- 7) promotes the idea that liberal arts education can meet the demands of contemporary society.

Whom To Contact?

If any of the involved parties have questions concerning procedures and/or goals of the Practicum Program, contact:

Dr. Wallace F. Witham, Director  
Center For Practicum Programs  
Bethany College, 112 Old Main  
Bethany, West Virginia 26032  
Telephone: (304) 829-7855

VOCATIONAL PRACTICUM  
(please type this form)

STUDENT'S NAME \_\_\_\_\_  
CAMPUS ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_  
HOME ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_  
DATE OF GRADUATION \_\_\_\_\_ DECLARED/PROBABLE MAJOR \_\_\_\_\_  
PRACTICUMS ALREADY COMPLETED: intercultural \_\_\_\_\_ citizenship \_\_\_\_\_  
physical education and recreation \_\_\_\_\_  
ACADEMIC ADVISOR \_\_\_\_\_ PRACTICUM ADVISOR \_\_\_\_\_

GENERAL GUIDELINES

A vocational practicum should provide an experience that will allow for the investigation of a career by spending approximately one month (160 hours) in an occupational setting.

The vocational practicum may be initiated at any time and is available to all students--freshmen through seniors. The experience should enable the student to examine his attitudes and values about a career and should provide a great deal more than work skills and specific job competencies.

Remuneration is often available with this practicum. However, it must be emphasized that having employment does not fulfill the practicum. It is necessary to pre-plan and evaluate the vocational experience in relation to career goals, educational goals, and interpersonal learning goals.

A proposal submitted after an activity has begun suggests that the activity is being undertaken with less than optimum planning and preparation. You may be requested to appear before the Practicum Committee and justify your tardiness and show proof of sufficient pre-planning. Failure to submit your proposal before you begin your practicum MAY be sufficient reason for rejecting your practicum proposal.

You must evaluate your practicum, have the practicum and the evaluation reviewed and approved by your practicum advisor, and return the signed practicum form to the Practicum Office within 30 days of the completion of the practicum. NOTE: For summer and January experiences, the 30 days commences with the first day of the following semester.

Although the student and advisor are free to establish additional requirements and to require additional supporting documents, the completed vocational practicum must include the following:

\*\*\* OVER \*\*\*

1) written documents chronicling progress toward the completion of this practicum. This documentation may be in the form of a daily log, weekly report, etc. The Practicum Office has available log forms that one may find useful in this reflecting process.

2) written statement from the practicum activity supervisor attesting that you did perform the tasks you stated you would do, that your involvement was for at least 160 hours, and how your work was of benefit to the supervisor's organization. The Practicum Office has appropriate forms available for supervisor use.

3) practicum advisor's signature attesting to a careful review of the above and approval of this practicum in light of the goals and procedures you outlined in your proposal application.

4) filing of this completed practicum form along with the typed abstract to the Practicum Office.

## VOCATIONAL PRACTICUM PROPOSAL

1. The name and address of the organization, association, agency, or individual with whom you will be working.
  
2. Dates of participation: from \_\_\_\_\_ to \_\_\_\_\_  
total hours: \_\_\_\_\_
  
3. Describe your practicum (use additional pages if necessary). Define your activities and responsibilities and provide information about the vocational setting.
  
  
  
  
  
  
  
  
  
  
4. What abilities, skills, knowledge, and information do you have that will assist you in this practicum?
  
  
  
  
  
  
  
  
  
  
5. Explain the methods of supervision, instruction, measurements, and/or evaluation to be used in your practicum.

### Pre-Planning Goals: A Summary

List your proposed learning goals in undertaking this practicum.  
(Worksheets explaining learning goals and reference materials including  
PATH and CAEL workbooks are available at the Practicum Office, or you may  
refer to the goals as stated in the Bethany College Catalog.)

#### Learning Goals:

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_  
\_\_\_\_\_
- etc. \_\_\_\_\_  
\_\_\_\_\_

(NOTE: There is no required number of goals. Use additional pages if  
necessary.)

I have read the above practicum proposal, assessed the merits of the  
activity described and reviewed the goals, procedures for attaining and  
evaluating the goals, and recommend the practicum proposal for approval.

Practicum Advisor \_\_\_\_\_ Date \_\_\_\_\_

THE STUDENT NOW TAKES THIS FORM TO THE PRACTICUM OFFICE. YOU WILL BE  
NOTIFIED BY THE PRACTICUM OFFICE OF ACCEPTANCE OR REJECTION OF THE PROPOSAL.

Practicum Committee \_\_\_\_\_ Date \_\_\_\_\_

INTERCULTURAL PRACTICUM  
(please type this form)

STUDENT'S NAME \_\_\_\_\_

CAMPUS ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_

HOME ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_

DATE OF GRADUATION \_\_\_\_\_ DECLARED/PROBABLE MAJOR \_\_\_\_\_

PRACTICUMS ALREADY COMPLETED: vocational \_\_\_\_\_ citizenship \_\_\_\_\_  
physical education and recreation \_\_\_\_\_

ACADEMIC ADVISOR \_\_\_\_\_ PRACTICUM ADVISOR \_\_\_\_\_

GENERAL GUIDELINES

Using personal resources or the facilities of the Practicum Center an idea is generated.

The student should meet with his practicum advisor. This practicum advisor in most cases will be the student's regular faculty advisor. However, in some special instances, this may be another member of the faculty such as a faculty member who knows the culture well.

Working with his practicum advisor, the student is to complete the written practicum proposal form and gain the approval of his practicum advisor.

Although the student and advisor are free to establish additional supporting documents, this completed practicum must include the following:

- 1) written documents chronicling progress toward the completion of this practicum. This documentation may be in the form of a daily log, weekly report, etc. The Practicum Office has log forms that you may find useful in this reflecting process.
- 2) written evaluation of the success and/or failure in pursuit of the learning goals you set forth in the proposal application.
- 3) practicum advisor's signature attesting to a careful review of the above and approval of this practicum in light of the goals and procedures you outlined in your proposal application.
- 4) filing of this completed practicum form along with the typed abstract to the Practicum Office within 30 days of its completion. NOTE: For January and summer experiences, the 30 days commences with the first day of the following semester.

## INTERCULTURAL PRACTICUM GENERAL INFORMATION AND GUIDELINES

The intercultural practicum is designed to help the student engage in self-examination and to give an opportunity to expand the liberal arts background.

A culture consists of a series of beliefs, norms or rules, and materials or things. They are all interrelated and act on each other. For example, in our middle class the T.V. (material) influences what we know or how we perceive the world (beliefs and norms). Thus we find that T.V. producers can't do some things because of our norms. Yet as producers create new programs, they may affect both the beliefs and the norms. As another example, just look at the changes in dating patterns (norms) since the automobile (a material part of the culture).

If you found a group of people who did not believe in education, gave away their excess food and didn't expect to have a car and a T.V. set, you would have found something other than the middle class culture of the U.S.A. Culture exists because people with one set of cognitive structures, beliefs, expectations of what's normal, and who share the same kinds of material objects (homes, tools, transportation, etc.) tend to band together. They tend to perceive the world in the same way and if given a choice, they choose each other as friends, neighbors, and associates.

Most cultures are in transition. There are few places where grandmother can predict accurately what granddaughter's life will be like. The few "pure" or primitive cultures of the world are changed just by the presence of an outsider. Thus we cannot be absolute when we refer to any aspect of culture.

It is hoped that Bethany students will inspect their own ideas, norms, and material beliefs. Unless we inspect our culture, it rules us. We are deprived of choice making. We take as givens (absolutes, imperatives) many things that are really areas for choice making. The easiest way (maybe the only way) for us to understand our own culture is for us to interact with another culture in a significant way. You should plan to do this self-examination before you try to examine another culture.

We have outlined several steps to follow as you identify, design, and evaluate your intercultural practicum.

### I. Identify culture

It could be a subculture within our predominant culture (old people, poor people, any specific subgroup which is different in some way). If you use the sociological term "deviant" or the common word "strange" to describe some things about how a group of people live, you have probably identified a culture. They think differently, act differently, and view the world differently in some way. It may be regional, ethnic, national, racial, social, economic; but it must be different and total.

## II. Explain how they are different

You will not be able to explain much until you complete your practicum. But initially you should justify that it is a separate culture by pointing out a few things you perceive to be different. Anthropologists list many cultural universals that every group of people, every culture, finds necessary. They range from ways of greeting each other, and eating habits, to sports and funeral practices. Cultures will vary in how members go about meeting these universals. Explain a few differences between your culture and the one you will be experiencing just to be sure you are engaging in an intercultural experience.

## III. Plan for engaging the culture

Explain what type of contact you will have with this culture. Will you spend an evening a week for a semester, two weeks fulltime, etc.? How will you manage to get into the culture? An American at the Bangkok Hilton is probably not engaging the Thai culture. Walking around a race track is not engaging the racing subculture. You should plan to read or talk to someone familiar with the culture before you begin.

It is hard to imagine having an intercultural experience with less than two weeks full immersion. Even then you will probably need to do some prior investigation, reading, or talking with others who know the culture. There is often a benefit in spreading your contact with another culture over a period of time. The hour limits can be reduced if you have done a great deal of previous research into your own belief system and the culture you are planning to investigate.

Failure to preplan or to have sufficient time in the experience MAY be reason to deny approval.

## IV. Experience the culture

Spend time in the culture. Experience it. Become a part of the culture so that even if you can't think as they do and value as they do, you can at least explain how it is for them. You may find it necessary to act differently. If your intercultural is with prisoners, you may not solve problems the way men in prison do. However, you should try to understand and explain why prisoners solve them that way.

## V. Tell how it IS

Write or tell about the other culture. Explain how they view the world. Don't evaluate. Avoid value words and phrases like, "It's good the way they . . ."; "dirty"; good/bad; pro/con. Attempt to explain things from that culture's viewpoint recognizing that how it seems to you may not be how it actually is for them. Cultures are complex and the many factors are interrelated. Keep your mind open.

## VI. Evaluate the experience

Again, don't judge them. Evaluate the meaning of the experience for YOU. How did you feel, what did you learn about yourself, your culture? If you've had an intercultural experience you will want to share it with others. The form is to be returned within 30 days of completion.

## INTERCULTURAL PRACTICUM PROPOSAL

1. Describe a few aspects of the culture which make you feel the experience will be intercultural for you. (Review points I and II on the general guidelines.)
2. Explain how you will have access to this culture, where you will be, what you will do. (Review point III on general guidelines.)
3. During what period of time will this experience occur, and how many hours will you spend?
4. Is there a person who can attest to your participation in this intercultural activity? The Practicum Office has available appropriate forms.

### Pre-Planning Goals: A Summary

List your proposed learning goals in undertaking this practicum.  
(Worksheets explaining learning goals and reference materials including  
PATH and CAEL workbooks are available at the Practicum Office, or you may  
refer to the goals as stated in the Bethany College Catalog.)

#### Learning Goals:

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_  
\_\_\_\_\_
- etc. \_\_\_\_\_  
\_\_\_\_\_

(NOTE: There is no required number of goals. Use additional pages if  
necessary.)

I have read the above practicum proposal, assessed the merits of the  
activity described and reviewed the goals, procedures for attaining and  
evaluating the goals, and recommend the practicum proposal for approval.

Practicum Advisor \_\_\_\_\_ Date \_\_\_\_\_

THE STUDENT NOW TAKES THIS FORM TO THE PRACTICUM OFFICE. YOU WILL BE  
NOTIFIED BY THE PRACTICUM OFFICE OF ACCEPTANCE OR REJECTION OF THE PROPOSAL.

Practicum Committee \_\_\_\_\_ Date \_\_\_\_\_

# PRACTICUM FINAL EVALUATION FORM

This evaluation form enables the student to measure the validity of the practicum as a learning experience in terms of personal fulfillment and meeting learning goals. The practicum advisor should use the student's evaluation plus supporting documents to determine the educational value of the practicum.

\*\*\* FOR DISCUSSION PURPOSES ONLY \*\*\*

Final Learning Goals:

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_  
\_\_\_\_\_
- etc. \_\_\_\_\_  
\_\_\_\_\_

(NOTE: There is no required number of goals. Use additional pages if necessary.)

Level of Achievement  
(1-4 rating scale\*)

In the box below, evaluate how well you succeeded in the achievement of your learning goals.

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

## \*Rating Scale

- 1 - limited accomplishment
- 2 - average accomplishment
- 3 - better than average accomplishment
- 4 - far exceeds average accomplishment

I have read the supporting documents required for the completion and evaluation of this practicum, and have reviewed the required abstract. I certify the satisfactory completion of the practicum.

Additional Comments:

Practicum Advisor \_\_\_\_\_ Date \_\_\_\_\_

## PRACTICUM ABSTRACT

IMPORTANT: THIS FORM IS OPTIONAL. However, the information contained in this abstract can be incorporated into your resume form on file in the Placement Office. If you do not wish to have this information placed on file, merely make a statement to that effect in the space below. Otherwise, in twenty-five (25) words or less, state the practicum placement and describe the skills and/or activities utilized. Remember that this abstract may be read ten years from now by someone unfamiliar with the practicum program, so organize your statement accordingly.

Name \_\_\_\_\_ Class \_\_\_\_\_ Practicum \_\_\_\_\_

Dates: from \_\_\_\_\_ to \_\_\_\_\_ Practicum Advisor \_\_\_\_\_

## A P P E N D I X B

### REPORT ON ADAPTATION OF MODEL FOR CLINICAL INSTRUMENTATION SYSTEMS PROGRAM

Prepared By:

Barbara French, Research Staff, University College, University of Minnesota

The Clinical Instrumentation Systems program is designed to provide the educational experience and accomplishments necessary for the application of technological principles responsibly, effectively, and safely, to the application of medical devices, instrumentation, and systems. University College affords a mechanism for qualified students to plan an educational program leading to a B.S. degree with a concentration in Clinical Instrumentation Systems. The first two years of the curriculum represent a typical lower division engineering study, while the last two years offer a student an opportunity to specialize in a chosen field of technology as well as obtain the necessary life sciences background. A three quarter sequence of integrated coursework in Clinical Instrumentation Systems is offered through University College as part of this program.

Students admitted to the program spent winter quarter (1976) out of the classroom, for the most part, and in University Hospital, gaining experience in a clinical environment and undertaking individual projects. The instructor for this portion of the course sequence cooperated with the research staff of University College in adapting and field testing the Record-Reflection Log and the assessment matrix.

The Log was modified to be used on a weekly rather than daily basis--the students usually spent only one day a week at the hospital, but this varied. Another modification is the inclusion of section III: suggestions for solutions to problems they encounter. This seemed to be especially appropriate for students who will be concerned professionally with problem-solving in a clinical setting.

The assessment matrix was developed for several reasons. First, the course sequence is new this year and the instructor hoped to use the student assessments as part of his effort to document every aspect of the program. Second, the instructor did not want to use traditional classroom assessment techniques (i.e., tests) but wanted to be as "objective" as possible in making judgments about student performance. He wanted the assessment process to be useful to him and to the student.

Six students used the Record/Reflection Log weekly and the instructor used the matrix weekly, filling one out for each student. After about four weeks of the quarter, an analysis of the matrices pointed up the need for students to become more aware of the patient environment--students seemed to be much better able to describe, analyze, and problem-solve in the medical and technical environments, but were doing poorly in describing

and analyzing the patient environment. By the end of the course, the instructor, when interviewed informally, urged the research staff to recommend the continued use of these two assessment instruments in the future. Students reported they found the Logs useful and easy to work with. The matrix proved to be very helpful in assessing students' experiences and in providing data for documentation and development of the program. The research staff will recommend that these assessment instruments be used when appropriate by instructors in this program.

# CAEL INSTITUTIONAL REPORTS

|       |                                                                                                                                                                      |        |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| No. 1 | <i>Antioch College.</i> The Use of Expert Judgment in the Assessment of Demonstrated Learning in the Antioch College Yellow Springs Adult Degree Completion Program. | \$2.00 |
| No. 2 | <i>Empire State College.</i> Prospects and Methods for Interpersonal Studies (Revised Edition)                                                                       | \$2.00 |
| No. 3 | <i>University of California at Los Angeles.</i> Documentation and Evaluation of Sponsored Experiential Learning (Revised Edition)                                    | \$2.00 |
| No. 4 | <i>Wayne State University.</i> The Refinement and Modification of an Instrument for Assessing the Achievement of Interpersonal Skills of Social Work Students        | \$2.00 |
| No. 5 | <i>William Rainey Harper College.</i> Guidelines and Procedures for the Assessment of Experiential Learning and for the Selection and Training of Field Experts      | \$2.00 |

## INSTITUTIONAL REPORTS OF THE CAEL OPERATIONAL MODELS PROJECT

|                                                                                                                                                  |                                                                         |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------|
| <i>Antioch College</i>                                                                                                                           | Coordinating Educational Assessment Across College Centers              | \$3.50 |
| <i>Community College of Vermont</i>                                                                                                              | Standard Setting by Students and Community--How Much Is Enough?         | \$3.50 |
| <i>Delaware County Community College</i>                                                                                                         | Implementing and Financing Portfolio Assessment in a Public Institution | \$3.50 |
| <i>Florida International University</i>                                                                                                          | Implementing Competency-Based Assessment of Prior Learning              | \$3.50 |
| <i>Metropolitan State University</i>                                                                                                             | An Individualized Competence-Based Assessment Model                     | \$3.50 |
| <i>Webster College</i>                                                                                                                           | Analyzing Costs in the Assessment of Prior Learning                     | \$3.50 |
| <i>The Consortium of the California State University and Colleges,</i><br><i>Memphis State University, Union College, University of Kentucky</i> | Initiating Experiential Learning Programs: Four Case Studies            | \$5.00 |

A list of other CAEL publications is available upon request.